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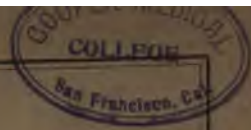
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ANNUAL REPORT

OF THE

OPERATIONS

OF THE

UNITED STATES LIFE-SAVING SERVICE

FOR THE

FISCAL YEAR ENDING JUNE 30, 1877.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1877.

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REPORT

OF THE

UNITED STATES LIFE-SAVING SERVICE.

TREASURY DEPARTMENT,
UNITED STATES LIFE-SAVING SERVICE,
Washington, D. C., November 29, 1877.

SIR: The following report of the expenditures of the moneys appropriated for the maintenance of the Life-Saving Service for the fiscal year ending June 30, 1877, and of the operations of said service during the year, is herewith submitted, in compliance with the requirements of the act of July 31, 1876.

The following statements show the appropriations and expenditures for the year:

APPROPRIATION—LIFE-SAVING SERVICE, 1877.

For salary of one superintendent of life-saving stations on the coasts of Maine and New Hampshire, district No. 1..	\$1,000 00
For salary of one superintendent of life-saving stations on the coast of Massachusetts, district No. 2.....	1,000 00
For salary of one superintendent of life-saving stations on the coast of Long Island, district No. 3	1,500 00
For salary of assistant superintendent of life-saving stations on the coast of Rhode Island, district No. 3	500 00
For salary of one superintendent of life-saving stations on the coast of New Jersey, district No. 4.....	1,500 00
For salary of one superintendent of life-saving stations on the coasts of Delaware, Maryland, and Virginia, district No. 5.....	1,000 00
For salary of one superintendent of life-saving stations on the coasts of Virginia and North Carolina, district No. 6.	1,000 00
For salary of one superintendent of life-saving stations on the coast of Florida, district No. 7.....	1,000 00
For salary of one superintendent of life-saving stations on the coasts of Lakes Erie and Ontario, district No. 8.....	1,000 00
For salary of one superintendent of life-saving stations on the coasts of Lakes Huron and Superior, district No. 9..	1,000 00
For salary of one superintendent of life-saving stations on the coast of Lake Michigan, district No. 10	1,000 00
For salaries of 152 keepers of life-saving stations, at \$200 each.....	30,400 00
For salaries of five keepers of houses of refuge on the coast of Florida, at \$40 per month each.....	2,400 00

UNITED STATES LIFE-SAVING SERVICE.

For pay of crews of experienced surfmen at such stations and for such periods as the Secretary of the Treasury may deem necessary and proper.....	\$145,000 00	
For compensation to volunteers at life-boat stations.....	8,160 00	
Total		<u>\$197,460 00</u>

EXPENDITURES.

Salary of superintendent of life-saving stations in district No. 1.....	\$1,000 00	
Salary of superintendent of life-saving stations in district No. 2	1,000 00	
Salary of superintendent of life-saving stations in district No. 3	1,500 00	
Salary of assistant superintendent of life-saving stations in district No. 3	500 00	
Salary of superintendent of life-saving stations in district No. 4.....	1,500 00	
Salary of superintendent of life-saving stations in district No. 5.....	1,000 00	
Salary of superintendent of life-saving stations in district No. 6.....	1,000 00	
Salary of superintendent of life-saving stations in district No. 7 (August 2, 1876, to March 31, 1877, inclusive).....	663 12	
Salary of superintendent of life-saving stations in district No. 8	1,000 00	
Salary of superintendent of life-saving stations in district No. 9	1,000 00	
Salary of superintendent of life-saving stations in district No. 10	1,000 00	
		11,163 12
Pay of 114 keepers, districts Nos. 1, 2, 3, 4, 5, 6, and 10, quarter ending September 30, 1876.....	5,567 72	
Pay of 135 keepers, districts Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10, quarter ending December 31, 1876.....	6,798 96	
Pay of 137 keepers, districts Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10, quarter ending March 31, 1877	7,251 08	
Pay of 138 keepers, districts Nos. 1, 2, 3, 4, 5, 6, 8, and 9, quarter ending June 30, 1877	6,401 18	
		\$26,018 94
Pay of 36 surfmen in district No. 1, November 1, 1876, to April 30, 1877, inclusive.....	8,640 00	
Pay of 24 surfmen in district No. 2, November 1, 1876, to April 30, 1877, inclusive.....	5,760 00	
Pay of 60 surfmen in district No. 2, November 1, 1876, to April 15, 1877, inclusive.....	13,198 66	
Pay of 36 surfmen in district No. 3, November 15, 1876, to April 15, 1877, inclusive.....	7,200 00	
Pay of 168 surfmen in district No. 3, November 15, 1876, to March 31, 1877, inclusive	30,240 00	
Pay of 36 surfmen in district No. 4, November 15, 1876, to April 15, 1877, inclusive.....	7,200 00	
Pay of 186 surfmen in district No. 4, November 15, 1876, to March 31, 1877, inclusive	33,480 00	
Pay of 36 surfmen in district No. 5, December 1, 1876, to March 31, 1877, inclusive	5,760 00	

UNITED STATES LIFE-SAVING SERVICE.

5

Pay of 12 surfmen in district No. 5, December 21, 1876, to March 31, 1877, inclusive	\$1,776 00	
Pay of 54 surfmen in district No. 6, December 1, 1876, to March 31, 1877, inclusive	8,640 00	
Pay of 6 surfmen in district No. 6, December 1, 1876, to April 7, 1877, inclusive	1,016 00	
Pay of 18 surfmen in district No. 8, October 6 to December 10, 1876, inclusive	528 00	
Pay of 18 surfmen in district No. 8, April 1 to May 31, 1877, inclusive	1,312 00	
Pay of 30 surfmen in district No. 9, October 1, to December 31, 1876, inclusive	3,047 86	
Pay of 32 surfmen in district No. 9, April 1, to June 1, 1877, inclusive	2,447 99	
Pay of 24 surfmen in district No. 9, May 26, to June 30, 1877, inclusive	1,145 76	
Pay of 12 surfmen in district No. 10, October 15, to December 10, 1876, inclusive	846 60	
		\$132,238 87
Pay of 35 surfmen in district No. 1, for one day's drill and exercise		105 00
Pay of surfmen in district No. 1, for services at wrecks which occurred between July 1, and November 1, 1876, and between May 1, and June 30, 1877, periods when crews were not required to reside at the stations	54 00	
Pay of surfmen in district No. 4, for services at wrecks which occurred between April 15 and June 1, 1877, a period when crews were not required to reside at the stations ..	129 00	
Pay of surfmen in district No. 5, for services at wreck August 3, 1876	18 00	
Pay of surfmen in district No. 6, for services at wreck April 11, 1877	18 00	
Pay of volunteer crew at life-boat station No. 5, district No. 10, for services at wrecks	140 00	
Pay of volunteer crews at life-boat stations in district No. 10, for services at wrecks	344 00	
		703 00
Total expenditures, Life-Saving Service, 1877		170,228 93
Balance of available funds, July 1, 1877		27,231 07
		197,460 00

APPROPRIATION—LIFE-SAVING SERVICE, CONTINGENT EXPENSES, 1877.

For fuel for 157 stations and houses of refuge, repairs and outfits for the same, supplies and provisions for houses of refuge and for shipwrecked persons succored at stations, traveling expenses of officers under orders from the Treasury Department, and contingent expenses, including freight, storage, repairs to apparatus, medals, stationery, advertising, and miscellaneous expenses that cannot be included under any other head of life-saving stations, life-boat stations, and houses of refuge on the coasts of the United States	\$40,000 00
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UNITED STATES LIFE-SAVING SERVICE.

EXPENDITURES.

Apparatus	\$8,895 16	
Boat-house for station 4, district No. 1.....	291 00	
Dies for medals of first class	600 00	
Freight, storage, packing, telegraphing, &c.....	583 73	
Fuel for 111 stations.....	5,508 07	
Furniture, supplies, &c.....	3,187 93	
Hire of horses to assist in transporting apparatus from sta- tions to scene of wrecks.....	23 50	
Library-cases	661 32	
Lithographic copies of plans of boats and houses.....	90 00	
Medals	131 50	
Outfits	768 23	
Recording deed	1 00	
Removal of stations on account of encroachment of the sea.	486 00	
Rent of inspector's office, New York City	200 00	
Repairs to stations and apparatus.....	1,879 63	
Stationery	290 07	
Sustenance of persons rescued from wrecked vessels.....	198 20	
Traveling expenses of officers.....	4,093 13	
Total expenditures Life-Saving Service, contingent expenses, 1877.		\$27,888 47
Balance available July 1, 1877.....		12,111 53
		<hr/> 40,000 00

The above statements differ from the statement of expenditures by warrants for the year in the following particulars:

	Life-Saving Service, 1877.	Life-Saving Service, contingent expenses, 1877.
Amounts expended as per statement of "Expenditures by warrants"	\$170,078 93	\$29,177 73
Due to appropriation for the "Establishment of new life-saving stations," &c., as per account of E. W. Watson, late superintendent	150 00	
Item chargeable to "Life-Saving Service contingent expenses, 1877," improperly charged to "Life-Saving Service, contingent expenses, 1876," and not corrected until present fiscal year..... \$3 00		
In hands of disbursing-clerk June 30, 1877, and belonging to the appropriation for contingent expenses	1,286 26	1,289 26
Net expenditures	170,228 93	27,888 47

At the beginning of the year there remained on hand, available from appropriations of the preceding year, the following:

	Life-Saving Service, 1876.	Life-Saving Service, contingent expenses, 1876.
Unexpended balances July 1, 1876.....	\$55,446 68	\$3,459 66
To which repayments have been made as follows.....	225 60	88 07
Total available.....	55,672 28	3,547 73

The expenditures from these balances during the last fiscal year, made in payment of indebtedness standing over from the preceding year, were as follows:

Life-Saving Service, 1876, available	\$55,672 28	
Paid William W. Ware, superintendent, balance due on salary	\$2 72	
Pay of one superintendent of life-saving stations in district No. 3, for quarter ending June 30, 1876	375 00	
Pay of assistant superintendent of life-saving stations in district No. 3, for quarter ending June 30, 1876	125 00	
Pay of 33 keepers in district No. 3, for quarter ending June 30, 1876	1,650 00	
Pay of 36 surfmen in district No. 3, from April 1 to 15, 1876 ..	720 00	
Pay of superintendent of life-saving stations in district No. 7, August 7 to September 25, 1875	135 86	
Pay of surfmen in districts Nos. 1, 4, and 6, for services at wrecks which occurred during a period when crews were not required to reside at the stations	69 00	
		3,077 58
Balance unexpended July 1, 1877		52,594 70
		55,672 28
Life-Saving Service, contingent expenses, 1876, available	3,547 73	
Apparatus	\$761 84	
Freights, &c	37 14	
Hire of horses to assist in transporting apparatus from stations to scene of wreck	8 00	
Medals	2,370 81	
Recording deed	3 00	
Rent of inspector's office, New York City	100 00	
Repairs to apparatus	5 00	
Sustenance of persons rescued from wrecked vessels	38 25	
Traveling expenses of officers	80 67	
		3,404 71
Balance unexpended July 1, 1877		143 02
		3,547 73

UNITED STATES LIFE-SAVING SERVICE.

The total net expenditures of the service during the year were there fore as follows:

Life-Saving Service, 1877.....	\$170,228 93
Life-Saving Service, 1876.....	3,077 58
Aggregate.....	\$173,306 51
Life-Saving Service, contingent expenses, 1877.....	\$27,888 47
Life-Saving Service, contingent expenses, 1876.....	3,404 71
Aggregate.....	31,293 18
Total.....	204,599 69

There remained standing to the credit of the respective appropriations at the close of the fiscal year ending June 30, 1877:

Life-Saving Service, 1876.....	\$52,594 70
Life-Saving Service, 1877.....	27,231 07
Life-Saving Service, contingent expenses, 1876.....	143 02
Life-Saving Service, contingent expenses, 1877.....	12,111 53

The remaining of so large a balance to the credit of the appropriation designated as "Life-Saving Service, 1876," was explained in the report of last year as arising from the fact that in consequence of unavoidable delays in obtaining sites and in the construction of buildings, many of the new stations did not go into operation that year. It will be seen further on that none of these were in condition for occupancy during the entire last fiscal year, and that several of them were not completed until after its close. This fact will account for the considerable balance standing to the credit of the appropriation designated "Life-Saving Service, 1877."

The outstanding claims against the appropriation for contingent expenses for 1877 will nearly or quite exhaust it.

OPERATIONS.

The scope of the Life-Saving Service has been considerably enlarged during the past fiscal year in consequence of the organization of four additional districts—three upon the lakes and one upon the Atlantic coast (Florida). None of the stations in the new districts, however, were in operation the entire fiscal year, and several of them were not ready for service until after its expiration. The dates at which the several new stations which were in readiness prior to June 30, 1877, were opened for service are as follows:

DISTRICT No. 3.

Station No. 35, Point Judith.....	Nov. 15, 1876.
Station No. 36, Eaton's Neck.....	Nov. 15, 1876.

DISTRICT No. 4.

Station No. 40, Cape May.....	Nov. 15, 1876.
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DISTRICT No. 7.

Five houses of refuge, Florida.....	Mar. 29, 1877.
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DISTRICT No. 8.

Station No. 1, Big Sandy Creek.....	April 16, 1877.
Station No. 2, Salmon Creek.....	April 1, 1877.
Station No. 3, Oswego.....	Sept. 28, 1876.
Station No. 4, Charlotte.....	Oct. 2, 1876.
Station No. 6, Presque Isle.....	Oct. 6, 1876.
Station No. 7, Fairport.....	Oct. 10, 1876.
Station No. 8, Cleveland.....	Sept. 20, 1876.
Station No. 9, Marblehead.....	Sept. 20, 1876.

DISTRICT No. 9.

Station No. 1, Point aux Barques.....	Sept. 15, 1876.
Station No. 2, Ottawa Point.....	Oct. 6, 1876.
Station No. 3, Sturgeon Point.....	Sept. 15, 1876.
Station No. 4, Thunder Bay Island.....	Sept. 25, 1876.
Station No. 5, Forty-Mile Point.....	Sept. 30, 1876.
Station No. 6, Vermillion Point.....	May 15, 1877.
Station No. 7, seven miles west of Vermillion Point.....	May 15, 1877.
Station No. 8, Two-Heart River.....	May 15, 1877.
Station No. 9, Sucker River.....	May 15, 1877.

DISTRICT No. 10.

Station No. 2, North Manitou Island.....	June 23, 1877.
Station No. 3, Point aux Bee Seles.....	April 23, 1877.
Station No. 4, Grand Point au Sable.....	May 15, 1877.
Station No. 5, Grand Haven.....	May 1, 1877.
Station No. 6, Saint Joseph.....	May 1, 1877.
Station No. 7, Chicago.....	May 25, 1877.
Station No. 9, Racine.....	June 2, 1877.
Station No. 10, Milwaukee.....	May 7, 1877.
Station No. 11, Sheboygan.....	May 4, 1877.
Station No. 12, Two Rivers.....	May 1, 1877.

The active season, or the periods during which the crews of those stations denominated complete life-saving stations are paid a monthly compensation, and are required to reside at the stations, was as follows in the several districts:

DISTRICT No. 1 (coast of Maine and New Hampshire).—From November 1, 1876, to May 1, 1877.

DISTRICT No. 2 (coast of Massachusetts).—Stations Nos. 1, 2, 5, and 6, from November 1, 1876, to May 1, 1877, and the remaining stations from November 1, 1876, to April 15, 1877.

DISTRICT No. 3 (coast of Rhode Island and Long Island).—Stations Nos. 2, 5, 19, 23, 27, 30, and 35, from November 15, 1876, to April 15, 1877, and the remaining stations from November 15, 1876, to April 1, 1877.

DISTRICT No. 4 (coast of New Jersey).—Stations Nos. 2, 10, 12, 17, 27, and 35, from November 15, 1876, to April 15, 1877, and the remaining stations from November 15, 1876, to April 1, 1877.

DISTRICT No. 5 (coast from Cape Henlopen to Cape Charles).—From December 1, 1876, to April 1, 1877.

DISTRICT No. 6 (coast from Cape Henry to Cape Hatteras).—From December 1, 1876, to April 1, 1877, with the exception of the station at Cape Henry (No 1), where the time was extended one week on account of the severity of the weather, there being also two vessels ashore at the time in the vicinity of the station.

During these periods the surfmen were paid at the rate of forty dollars per month each. Their services, however, were at the disposal of the government at all other times, and were required upon occasions of shipwreck, at each of which they were severally paid three dollars.

At the life-boat stations the crews are not employed for any specific time, the dependence being upon the volunteer crews enrolled at the several stations, and, in the absence of any of their members, upon such competent persons as are willing to take their places. The enrolled volunteers are allowed ten dollars upon each occasion of saving human life, volunteers not enrolled being allowed three dollars. This distinction in the sums paid enrolled volunteers and those volunteering for particular occasions is made with the view of encouraging the formation of regular crews who can be depended upon when their services are required, and who will take pride in improving themselves by drill and exercise in the use of boats and other life-saving apparatus.

At each of the houses of refuge, the nature of the coast not requiring the usual life-saving appliances, a keeper only is employed, who resides there with his family. These houses are furnished with accommodations and provisions for the succor and maintenance of persons cast ashore, until they are able to leave the stations.

The Florida coast being extremely desolate and barren, the keeper of each house of refuge and the available members of his family are expected, after a storm, to traverse it in either direction as far as practicable for the purpose of discovering any persons who may have been cast ashore.

STATISTICS.

The reports of the superintendents of the several districts show that there have been during the year 134 disasters to vessels within the limits of the operations of the service.

On board these vessels there were just 1,500 persons. The estimated value of the vessels was \$1,986,744, and that of their cargoes \$1,306,588, making a total valuation of \$3,293,332. The number of lives saved was 1,461, and of those lost 39. Shipwrecked persons numbering 368 were sheltered at the stations, and the total number of days' shelter afforded them was 963. The total amount of property saved was \$1,713,647, and the amount lost \$1,579,685. The number of disasters resulting in total loss to vessels and cargoes was 34. On nearly every occasion of disaster aid of some sort was rendered by the crews of the stations, either in succoring the shipwrecked or in saving property, and upon fifty occasions, by the use of the life-saving apparatus, an aggregate of 871 persons were landed.

The apportionment of the foregoing statistics to the several districts is as follows:

District No. 1.

Number of disasters.....	22
Value of vessels.....	\$185,830
Value of cargoes.....	64,772
Total value of property.....	250,602
Number of persons on board vessels.....	180
Number of persons saved.....	180
Number of persons lost.....	None.
Number of shipwrecked persons sheltered at stations.....	8
Number of days' shelter afforded.....	16
Value of property saved.....	\$237,340
Value of property lost.....	13,262
Number of disasters involving total loss of vessels and cargoes.....	None.

District No. 2.

Number of disasters.....	21
Value of vessels.....	\$224,300
Value of cargoes.....	129,596
Total value of property.....	353,896
Number of persons on board vessels.....	158
Number of persons saved.....	157
Number of persons lost.....	1
Number of shipwrecked persons sheltered at stations.....	79
Number of days' shelter afforded.....	222
Value of property saved.....	\$160,050
Value of property lost.....	193,846
Number of disasters involving total loss of vessels and cargoes.....	9

District No. 3.

Number of disasters.....	12
Value of vessels.....	\$236,500
Value of cargoes.....	83,800
Total value of property.....	320,300
Number of persons on board vessels.....	149
Number of persons saved.....	121
Number of persons lost.....	28
Number of shipwrecked persons sheltered at stations.....	69
Number of days' shelter afforded.....	133
Value of property saved.....	\$95,055
Value of property lost.....	\$225,245
Number of disasters involving total loss of vessels and cargoes.....	2

District No. 4.

Number of disasters.....	40
Value of vessels.....	\$901,380
Value of cargoes.....	\$912,465
Total value of property.....	\$1,813,845
Number of persons on board vessels.....	677
Number of persons saved.....	667
Number of persons lost.....	10
Number of shipwrecked persons sheltered at stations.....	113
Number of days' shelter afforded.....	215
Value of property saved.....	\$956,872
Value of property lost.....	\$856,973
Number of disasters involving total loss of vessels and cargoes.....	10

District No. 5.

Number of disasters.....	12
Value of vessels.....	\$98,500
Value of cargoes.....	\$36,480
Total value of property.....	\$134,980
Number of persons on board vessels.....	74
Number of persons saved.....	74
Number of persons lost.....	None.
Number of shipwrecked persons sheltered at stations.....	28
Number of days' shelter afforded.....	64
Value of property saved.....	\$80,750
Value of property lost.....	\$54,230
Number of disasters involving total loss of vessel and cargo.....	1

District No. 6.

Number of disasters.....	12
Value of vessels.....	\$172,734
Value of cargoes.....	\$25,175
Total value of property.....	\$197,909
Number of persons on board vessels.....	119
Number of persons saved.....	119
Number of persons lost.....	None.
Number of shipwrecked persons sheltered at stations.....	51
Number of days' shelter afforded.....	293
Value of property saved.....	\$31,700
Value of property lost.....	\$166,209
Number of disasters involving total loss of vessels and cargoes.....	9

District No. 7.

Number of disasters.....	1
Value of vessel.....	\$17,000
Value of cargo.....	\$9,720
Number of persons on board vessel.....	20
Number of persons saved.....	20
Number of persons lost.....	None.
Number of shipwrecked persons sheltered at stations.....	20
Number of days' shelter afforded.....	10
Value of property lost.....	\$26,720
Number of disasters involving total loss of vessel and cargo.....	1

*District No. 9.**

Number of disasters.....	5
Value of vessels.....	\$114,000
Value of cargoes.....	\$31,000
Total value of property.....	\$145,000
Number of persons on board vessels.....	85
Number of persons saved.....	85
Number of persons lost.....	None.
Number of days' shelter afforded at stations.....	None.
Value of property saved.....	\$126,800
Value of property lost.....	\$18,200
Number of disasters involving total loss of vessel and cargo.....	None.

* District No. 8 is omitted, no wrecks having occurred therein within the limits of the operations of the service, during the time between the opening of the stations and the close of the fiscal year.

District No. 10.

Number of disasters	9
Value of vessels	\$36,500
Value of cargoes	\$13,580
Total value of property	\$50,080
Number of persons on board vessels	38
Number of persons saved	38
Number of persons lost	None.
Value of property saved	\$25,080
Value of property lost	\$25,000
Number of disasters involving total loss of vessels and cargoes	2

During the year, upon the foregoing occasions of disaster, the surf-boat or life-boat was brought into use 104 times, and 216 trips were made with it. The life-car was employed 5 times, making 61 passages. The breeches-buoy was used once, making 6 passages. With the boat-swain's chair 34 passages were made on 3 occasions. The mortar was used at 13 disasters, 23 shots being fired. On a single occasion the Merriam life-suit was used, and the heaving-stick with which communication with wrecks at short distances is established, was thrown once.

LOSS OF LIFE.

There were four fatal disasters within the limits of the operations of the service in 1876, and, by an odd coincidence, the same number has occurred during the present year. The four wrecks referred to have involved the loss of thirty-nine lives, and although this number exceeds that of the preceding year by seventeen, it is gratifying to be able to state that in no instance is the sad result referable to the conduct of the life-saving crews, or to any defect in the methods of deliverance employed by the government. In fact, this dismal record is solely one of men perishing by their own imprudence or ill-fortune, and it is mitigated by the consideration that all possible efforts were promptly and powerfully made in their behalf by the Life-Saving Service.

In accordance with the uniform custom since the reorganization of the service, the circumstances of each wreck were immediately and thoroughly investigated with a view of ascertaining whether the employés of the service were remiss in the discharge of their duties, whether there was any failure or lack on the part of the appliances of the stations, and to what specific causes the several catastrophes were chargeable. The following statement of the results of these investigations is given in the order of the dates at which the casualties occurred.

WRECK OF THE SHIP CIRCASSIAN.

The first and most signal wreck of the year was that of the British ship *Circassian*, which happened at a point off shore about twenty rods west from Station No. 10, District No. 3, Bridgehampton, Long Island, between December 11 and 30, 1876. It is one of the saddest disasters in the annals of shipwrecks.

An account of the occurrence is here incorporated as given by a member of the board appointed to investigate the circumstances. The description of the fatal wrecks that ensued at other points during the year is from the same pen.

The *Circassian* was a large, full-rigged iron ship, 280 feet long, of 1,741 tons burden, about 20 years old, valued at \$145,000, and laden with a small general cargo, estimated to be worth \$45,000. Her history was somewhat remarkable. She had been formerly a steamer, owned in England, and during the war had been captured as a blockade-runner and sold to parties at the North. A short time afterward she went ashore on Sable Island, and was got off by the Columbian Wrecking Company, under the charge of Capt. John Lewis, who finally lost his life upon her. She was subsequently purchased by a New York firm, and placed on the New Orleans route. Upon a voyage to New York, she again went ashore, this time at Squan, New Jersey, in December, 1869. Being gotten off, she was laid up in dock about three years, and finally bought by a Liverpool house, and converted into a sailing-ship. Her final wreck took place upon her first voyage since her alteration. She was then bound from Liverpool to New York with a crew of 37 persons, including her commander, Capt. Richard Williams, together with 12 passengers whom she had taken from a wreck at sea.

On December 11th, at ten minutes to eleven o'clock at night, owing, as her captain stated, to an error of the compass, she ran upon a bar about 400 yards from the shore, where she stranded; her size and her great draught of water, which was 19½ feet, causing her to ground at this considerable distance. The night was dark; a northeast gale was blowing, with a thick snow-storm and heavy sea.

The ship was immediately discovered by the patrol of Station No. 10 (Capt. Baldwin Cook, keeper), and the crew of the station promptly assembled. To have launched the boat in the heavy seas, which in that vicinity roll in numerous combing breakers from the outer bar to the beach, would have been fool-hardy. It was equally impossible to reach the ship at that time with the shot-line; her distance from shore, the resistance of the gale to the line, and the darkness, which would have prevented the men firing the mortar from seeing by the bowing of the line what allowance to make for the force of the wind in aiming, and also prevented the people on board from discovering the line if it fell over the rigging, being all elements of failure. It was, therefore, necessary to wait till dawn before commencing operations, when the life-saving crew would have the double advantage of light and a lower tide. The gear meanwhile was gotten in readiness for action, and the crews of the contiguous stations, Nos. 9 and 11, were summoned from a distance of several miles on either hand.

At day-break the falling tide enabled the mortar to be planted lower on the beach and nearer the vessel, which also in the meantime had

been driven considerably nearer to the shore by the force of the sea; and, at the third fire, the ball fell plumply upon the deck and connection was made with hawser and hauling-lines for the use of the life-car.

The sea had now, however, subsided to such an extent that it was judged that more expeditious work could be done with the surf-boat, which was accordingly launched, and in seven trips the entire number of persons on board the vessel, forty-nine in all, were safely brought on shore.

During the night there was the usual difficulty in prevailing upon those on board the ship not to attempt to land in their own boats—an attempt which would certainly have resulted disastrously. It was prevented, however, and the deliverance of all on board was accomplished without casualty.

The Coast Wrecking Company, of New York, were now engaged to save the vessel and cargo, and at once commenced operations under the general direction of Captain Perrin, an agent of the company, and the local agent, Captain Charles A. Pierson, of Bridgehampton. Captain John Lewis, of New York, had immediate charge of the work on board the vessel, assisted by three engineers from New York, and twelve men, ten of whom were members of an Indian tribe, now whalers and wreckers, resident at the neighboring village of Shinnecock. Beside these sixteen persons there were on board the ship sixteen of her regular company, including the master and officers, making a total of thirty-two in all. Captain Luther D. Burnett, of Southampton, owing to his great experience as a surfer, had been employed by the wrecking company to take charge of the boats employed in lightening the ship by removing her cargo.

The ship lay across the bar with her head to the southeast. This transverse position, as events proved, was dangerous. Being of iron, very heavy, of great length, and lying thus substantially athwart a ridge, principally supported amidships, with her ends comparatively off the bottom in the deeper water, she had a constant tendency to sag and break in two. The object of the wrecking company was, of course, to work her off as speedily as possible into the open sea. In such cases the method usually adopted is to sink heavy anchors to seaward of the ship, the latter being held thereto by immense hawsers, and a perpetual strain being kept by the capstan upon these hawsers, the vessel, aided by the heavy swell and the rising tides, which tend to move and lift her, is gradually pulled toward the ocean. This course had been pursued with the *Circassian*, and within a fortnight she had been moved 98 yards upon the bar. She now lay a total distance from the shore of 308 yards at low tide.

Under the circumstances, it would have been prudent to have kept a line stretched from the ship to the shore, thus retaining communication with the life-saving station for use in case of emergency. This, however, the agents of the wrecking company, upon repeated solicitations,

steadily refused to do. It appears that the crew of twelve wreckers, including the ten Shinnecock Indians, had been engaged to remain on board the vessel until she floated off the bar. The coming easterly storm, with its accompanying high tides, was relied upon to aid in effecting the release of the ship, and the principal motive for refusing to allow a line to be run from the ship to the shore was the apprehension that the crew, fearing danger, might avail themselves of this means to leave the vessel during the storm, when their services would be most needed. Absolute dependence was placed upon the great strength of the ship to enable her to withstand the gale, and it was this miscalculation of her resistant power which led to the catastrophe.

As early as the 26th of December an easterly storm was prevailing and the weather was very threatening. By the 29th, the storm had so increased that the lighters engaged in removing the cargo were unable to work with safety, and at ten o'clock in the morning the last cargo-gang, led by Capt. Luther D. Burnett, came ashore. This was the latest communication had with the vessel.

It was expected that the ship would float at high water that night, and be taken to sea under canvas. During the day, however, the gale increased in violence, with snow and sleet, and the sea had become tremendous. By four o'clock in the afternoon the immense bulk of the ship was seen from the shore rolling and pounding heavily on the bar. It was also seen that the hawsers, bent to heavy anchors to seaward, had been slacked. This denoted that the hope of getting her out to sea at that particular time had been abandoned, and also that those on board were becoming apprehensive, and desired that she should be driven in toward the beach, where their peril would have been lessened. The slackening of her cables, however, had no effect, and it was seen later that she had settled in the water. This appearance was probably the result of her having already broken her hull, and explains why she did not move when her hawsers were eased.

Darkness came on without any abatement of the tempest, and the ship continued to labor heavily. It was not, however, till seven o'clock that she made any signal of distress. Notwithstanding the general confidence in her stoutness, alarm for her safety began soon to prevail. The crews of the next stations, Nos. 9 and 11, were at once sent for, and Capt. Baldwin Cook and his men, of station No. 10, hastened to prepare for the forlorn attempt at rescue.

Ordinarily, the beach presents the aspect of a broad, interminable avenue of sand, with the ocean on one hand, and a low line of hummocks and mounds, crowned with coarse grass, upon the other. Upon that night it presented an almost unprecedented spectacle. The broad space, usually bare, was flooded in the darkness by a furious sea, which momentarily broke all over it, with prodigious uproar and confusion, reaching in places as far as the beach hills, and pouring through their clefts or sluice-ways. So overswept was the beach with this seeth-

ing water, that the keeper and his men could with difficulty find a place upon which to plant the mortar for an attempt to fire a shot-line to the wreck. The spot finally fixed upon was almost under the beach-hills, 72 yards farther back than the position chosen for the mortar upon the occasion of the original stranding of the Circassian. The vessel being at a distance of 308 yards, at low tide, as stated, the mortar was now 380 yards from her. Although the effort was resolutely and persistently made, it is evident that no shot-line could possibly have reached her at such a distance in the teeth of the hurricane which prevailed. If it had, it would have been useless at this time, her decks being now completely swept by the surges, her crew already up in the fore-rigging for safety, and no one in a position to haul upon a line from shore. No other means of reaching the wreck was possible. In the tremendous sea then hurling thousands of tons of water each moment upon the beach, no life-boat, even if unbroken by the weight of the surf, could have been propelled from shore.

A red Coston light was burnt by the crew of the station to let the men in the fore-rigging of the wreck know that their peril was understood, and a large fire of driftwood was built upon shore, abreast of the ship, under the sand hills. The preparations for firing the mortar, which meanwhile actively continued, were much impeded at first by the difficulty of finding a place where the sea did not reach, and then by the wet, flying sand which covered the shot-line in spite of every effort to protect it. To keep the shot-line dry, free, and unsnarled, is necessary for its efficient flight toward a wreck. It was now almost immediately soaked by the rain and spray, clogged by the drifting sand, and frozen. By eight o'clock, however, the gun was in readiness. In the mean time the mainmast had fallen, carrying with it the mizzen topmast. This was a sinister occurrence. It denoted the beginning of the breaking up of the vessel.

The alarm and anxiety of the old captains and seamen on shore was now increased by an extraordinary circumstance. The mortar was just shotted and the line ready for the first fire, when the wind, which had been blowing furiously from the east-southeast all day, suddenly chopped around to the west-southwest, and became almost a tornado. So abrupt a change, with such an increase of fury in a gale, is almost unprecedented. It blew with such dreadful violence that it was nearly impossible to look to windward on account of the flying sand. A terrific cross-sea at once ensued. The water swelled up in great heaps, and swept the decks of the wreck from every side. The surf flooded the beach still higher, cutting away the beach-hills, and at intervals tearing new gullies through them. Added to all was a streaming torrent of rain. The bitter cold, the darkness, the frightful roar and commotion, the incessant hail of wet sand, the wind blowing so that men were thrown down by it, the general elemental pell-mell, made the scene indescribable.

The effect of this sudden change in the direction of the gale was to force the gun from the position which had been obtained for it with so much difficulty. In firing toward a wreck, allowance must be made for the yawing of the shot-line by the wind, and the position, somewhat to the eastward of the ship, which had been chosen on this consideration, had now to be taken up to the westward. Considerable time was consumed in the effort to find a suitable place for the mortar, and there was also trouble to get the match-rope to burn. At length, however, the obstacles were surmounted and several shots were fired in succession toward the vessel. It was necessary that the humane effort should be made, but as already remarked, it was impossible that any shot carrying a line could have reached her at such a distance and in such a gale, and equally impossible, even if it had reached her, that it could have been taken advantage of by the wretched men clinging to the fore-rigging with the furious mob of waters rioting over the hull below them. In fact one of the survivors expressly declared, "It would have been impossible for us to have used the line even if it had reached us."

Beyond the futile endeavor to reach the wreck by a shot-line, nothing further was or could be attempted. The only hope was that the wreck might hold together till daylight, when it was barely possible that something might be done to effect a rescue. The night was passed by those on shore in watching the vessel. What appeared to them, as some have said, the longest night ever known, must have seemed a miserable eternity to the hapless men upon the wreck. The storm never abated its violence. At midnight the tide fell. Lights were seen upon the deck, and the hull was apparently whole, but cleared of everything by the sea. At two o'clock (Saturday, December 30), it was descried by the glass that the men had left the foremast, and had taken to the mizzen rigging. At half past three the vast black hulk was seen to have broken in two; her forepart settling down outside, and her stern inside, the bar. The glass showed that the mizzen-mast was still erect, and the rigging was full of men. At times, through the roar of the tempest, their cries were heard by those on shore. At four o'clock, the mizzen-mast, which was of iron, began to careen to port with its living load. For half an hour the powerless watchers on the beach saw it gradually dipping toward the sea. At half past four it reached the monstrous water, into which it settled slowly, with the men that clung to the shrouds.

It is to the credit of the life-saving crews that the dreadful catastrophe did not paralyze what further exertion was possible. Nothing was more unlikely than that any person could reach the shore from the wreck in that raging sea; but, in view of such a possibility, Capt. H. E. Hunting, the superintendent of the district, had organized a lantern squad of 18 or 20 men to search the surf about 40 yards apart, and immediately upon the disappearance of the mast, they scattered up the beach, with their lanterns, to the eastward. The set, or current,

was running with great velocity outside the breakers to the east, which lessened the chances of any person reaching the shore. Suddenly, however, those in the rear heard a shout on ahead. A group of the life-saving men was approaching through the darkness with their lanterns, supporting four drooping figures, which they had hauled from the surf. These were the only survivors. The remaining 28 had perished.

The persons rescued were the first and second officers of the ship, the carpenter, and a seaman in the employ of the wrecking company. It appears that the two first named had obtained possession of a cylindrical piece of cork, 5 feet long and 11 inches in diameter, fitted it with straps and beackets, and arranged between themselves to cling to it for their last chance of life. When the mast dipped into the sea, they had sprung together as far forward as possible. They were at once immersed in the raging flood, and presently came to the surface clinging to the buoy. In a moment the seaman employed by the wrecking company clutched hold of the buoy, and then the carpenter, coming up near them, was seized and helped to a place beside them. Their salvation now was mainly owing to the perfect coolness, judgment, and resolution of the first officer of the ship, under whose management the escape was accomplished. This brave and steady man, under such circumstances, actually schooled his comrades in the course they were to pursue, and took command of their strange craft, as composedly as though he were assuming charge of the stanchest sea-boat. Under his direction the four men, side by side, locked legs with each other. This quadruple intertwining of their lower limbs bound them together, and served to steady the buoy to whose ropes they clung. They were now one mass in quaternion, tossed to and fro in the immense wash of the sea. Every other instant, in the thick darkness, they were flooded by the surge. At these times, under their gallant captain's word of command, they held their breaths and gripped the buoy-ropes hard, till their momentary release from the wave. In the reflux of the surge, his order bade them relax their hold a little for rest and breath. There was but a bare chance for life, but these manœuvres economized their strength and breath, till, swept eastward by the current and forward by the surf, the moment came which flung them into the shoaling breakers. Then under his last shout of command, in the furious welter of the surf and undertow, they gave all their reserved force to the desperate plunge ahead for the beach, and in the midst of their convulsive struggle, half on their feet and half dragged down by the wave, the men of the life-saving service rushed in upon them, and tore them from the sea. They were almost drowned, but they were saved.

In the common judgment of all present, old captains and seamen, this escape was little less than miraculous. There was hardly one chance in a thousand of its accomplishment, and it was unquestionably owing to the marvelous discretion and stout-heartedness of the first officer. The men were all terribly worn by their struggle. None of them could stand. The carpenter was nearly dead, and could not have been carried a mile

without perishing. Fortunately, the station was near, and the four survivors were brought to it and put into warm beds near the stove as quickly as possible. The medicine-chest was at once brought into requisition, and with the aid of mustard-plasters, brandy, coffee, dry clothes, and active chafing and rubbing, the sufferers were revived. It was not till noon the next day that the carpenter was considered out of danger.

The corpses of the twenty-eight persons lost were washed ashore within a fortnight afterward on Montauk Beach, and were buried by the town of East Hampton, except the ten Shinnecock Indians, who were brought off and buried by the Southampton people, and the bodies of Captain Lewis and the three engineers, which were taken to New York by the friends of the deceased.

The only persons upon the beach the night of the catastrophe were Capt. Charles A. Pierson; Capt. Jeremiah Ludlow and Capt. James R. Huntting, both retired shipmasters residing at Bridgehampton; Capt. Luther Burnett, and five of his cargo gang; Dr. Benjamin Babcock; Capt. H. E. Huntting, the superintendent of the third life-saving district; the keeper and crew of station No. 10; six men from station No. 9; and one man from station No. 11; making a total of twenty-five in all.

The statement of this melancholy disaster, which has been prepared with care and is supported by the testimony of the principal witnesses present, shows that the uttermost possible service was rendered by the officers and crews of the life-saving stations. It will be observed that at the outset they brought ashore in safety every person on board the vessel. The undue reliance of the persons in charge of the ship upon her power to withstand the force of the seas which broke her spine, and which led them, in the face of warnings of a storm of more than ordinary violence, to refuse to maintain connection with the shore, was undoubtedly the cause of the loss of life which followed. A line drawn between the vessel and the beach would have enabled the life-saving crews to have effected a rescue at any time prior to the breaking in of the hull, which forced the hapless wreckers and mariners to mount to the rigging. It is evident that from that moment no earthly power could aid them.

WRECK OF THE SCHOONER MASSACHUSETTS.

The next wreck of the year, fatal to human life, was that of the schooner Massachusetts, in the second life-saving district.

On the 2nd day of January, 1877, the schooner Walter Irving, of South Thomaston, Me., was discovered about 7 o'clock, a. m., by patrolman Lewis, of life-saving station No. 6 (Peaked Hill Bar, Cape Cod), stranded on the bar two miles east of the station. The alarm being given, Keeper D. H. Atkins and the crew of the station hastened with the mortar apparatus through a thick northeast snow-storm to the scene of the wreck, where they found that the crew of the schooner had succeeded in landing in their own boat about ten minutes before their

arrival. The landing had fortunately been accomplished without mishap, such attempts; as the following instance, and another further on, will show, being very liable to disaster, though nearly always made; seamen in their fatuity being prone to at once lower a boat and endeavor to get ashore, immediately upon stranding.

About three hours later, or at 10 o'clock a. m., while the crew of the schooner, who had been brought to the station in an exhausted condition, were being made comfortable, patrolman Chisholm, who had been ordered to keep the watch upon the beach in the opposite direction, returned with the report that another schooner, which proved to be the Massachusetts, of Rockland, Me., was coming in over the bar three-fourths of a mile west of the station, with her mainsail and jibs blown away, and her crew in the rigging. Keeper Atkins and his men instantly started with the hand-cart and mortar apparatus for the second wreck. The snow was still falling thickly, and a heavy sea was running. Fearing that the crew of the schooner would imperil their lives by trying to land, unless cautioned against it, the keeper, bent on warning them, pushed on ahead of his men, whose progress was necessarily impeded by the heavy apparatus they were dragging. The casualty the keeper dreaded had in fact happened. When within one hundred and fifty yards of the wreck he saw three men on the beach. They were part of the crew of the schooner. The only remaining man, the steward, had been drowned five minutes before the keeper's arrival.

The vessel had run almost high and dry upon the beach, her jib-boom being nearly close enough for the men to drop from the end of it on to the sand, the edge of the incoming surf, however, leaping up under it. The landing had been effected by the men dropping severally from the end of the boom, steadying themselves as they walked out thereon, by holding on to a line attached to the foremast. The steward, when half-way along the boom, was struck by a heavy wave breaking under the bows of the vessel, and, probably in fright, relinquishing the line, fell into the surf, and was instantly swept astern and disappeared.

The schooner, which was heavily laden with corn, appears to have been very old and unseaworthy, as she broke up and became a total wreck within twenty minutes after the keeper's arrival. It is likely that the knowledge of her rottenness, added to her contiguity to the shore, precipitated the action of her crew in leaving her. This hasty desertion undoubtedly occasioned the loss of life described. The crew of the station appear to have been in no way blamable in the matter. The thickness of the weather prevented them from discovering the schooner before she was driving upon the beach, and, the alarm being given, they responded to the call of duty with alacrity. The three men who got ashore were promptly brought to the station, in a rather exhausted condition, and well cared for, with the crew of the Walter Irving, for three days. Keeper Atkins, whose active humanity is as well known in the service as his gallantry and efficiency, then exerted himself in

procuring for them donations of clothing and money from the citizens of Provincetown, and also, through the kindness of the agent of the Old Colony Railroad Company, obtained for them free transportation to their homes.

WRECK OF THE AMÉRIQUE.

The Amérique was a French steamer of 3,033 tons burden, belonging to the line of the General Transatlantic Company between Havre and New York, and commanded by Capt. Alfred Ponzolz. She was a comparatively new vessel, having been built in 1865 and rebuilt in 1872. Her estimated value was \$200,000, and she was laden with a general cargo, valued at \$400,000. She had a pilot, but owing to some error in sounding, she stranded within 150 yards of the shore at three o'clock on Sunday morning, January 11, 1877, near Seabright, N. J., one mile and a half from life-saving station No. 3, and three-fourths of a mile from life-saving station No. 4. It was very dark at the time. There was a southeast wind, rain, a heavy sea, a wall of ice upon the beach along the line of the breakers, and a boiling surf full of enormous ice-cakes.

The stranding of the vessel was almost immediately discovered by patrolman Edwards, of station No. 3, and patrolman Ferguson, of station No. 4, who at once signaled to her by burning their red Coston lights and waving their lanterns, and hurried back to their respective stations to assist in the preparations for the rescue. These signals were seen on board the Amérique, but not responded to.

The crews of the stations answered promptly to the call. Keeper Charles H. Valentine, of No. 4, was at home, ill, and the station was in charge of surfman Potter, who, by fifteen minutes past three, had the men actively engaged in preparations for hauling the boat to the beach. Keeper Abner H. West, of No. 3, being farther away, received the alarm later, and at once hastened to the scene with all of his men, excepting one then out on patrol. As the wreck was nearer station No. 4, the crew of station No. 3 brought no apparatus except the large beach reflector-lantern. Upon arriving, however, Keeper West, not finding the keeper of station No. 4 present, took command and sent men to No. 4 to bring the mortar apparatus, dispatching his own crew for their boat, which was better adapted to the work in hand than the boat belonging to station No. 4.

Pending the arrival of the boat and apparatus, Keeper West observed a light near the water alongside of the ship. This signified that the attempt was about to be made to send a boat on shore, and the keeper and the three men left with him instantly endeavored to prevent it by shouting through the speaking trumpet, uttering loud cries, and making signals with their lanterns. Their warning voices, half-drowned by the noise of the steam from the vessel and the deafening roar of the surf crunching the broken ice upon the beach, were of no avail, for presently *the light was observed to pass alongside of the vessel, and then, in the*

darkness, a large white boat was seen spectrally gliding from the shadow of the steamer's bows upon the crest of a huge wave. What followed illustrates the extreme folly of attempts to make the shore in a boat, unless conducted by experienced surfmen. The appearance presented by breakers, when viewed from a point at sea, is so different from that afforded upon the land, and so deceptive, as to invite what seems a safe and easy enterprise, but one which is almost certain to result in disaster, not only from the treacherous illusion referred to, but from the ignorance, common among even the ablest seamen, of the difficult art, possessed only by professional experts, of handling a boat in the tumbling rollers of the surf. The boat which had put out from the *Amérique* contained twelve French sailors. It was very dark, and she was chiefly visible by a light which she carried. She had got about half-way to the shore when she was suddenly rolled over by an immense breaker, and came tumbling in empty toward the beach. For a moment it was thought that the whole boat's crew had perished, but the next they were vaguely seen struggling in the water. The gallant keeper instantly shouted to his three men to follow him, and the four dashed over the barrier of ice three feet high which lined the beach, and plunged waist-deep into the boiling undertow. A perilous and dreadful struggle for the lives of the drowning sailors now ensued in the edge of the heavy surf, which was thick with huge cakes of floating ice. The boat's crew were without life-preservers, although there was a good supply on board the steamer. They were encumbered with heavy clothing, and half-suffocated and frozen by the icy water and quite helpless, yet, animated with the dangerous activity of the drowning, they were flung in toward the shore by the breakers. The task laid upon the keeper and his men was to maintain their difficult foot-hold waist-deep in the strong current of the undertow, contending with the masses of floating ice which dashed against them, and at the same time to drag from the water these sailors, frantically clutching at their rescuers, while heavy and inert as logs for any reciprocal effort in their own behalf. At the first desperate onset, sorely beset by these difficulties, the four stalwart life-savers tore four men from the breakers; then plunging in again, they brought out four more. To complicate and add to these labors, after hauling the men from the undertow, they had to lift them by sheer force, they being perfectly helpless, over the icy barrier, three feet high, between the sea and shore. It was while helping to get those last rescued over, that the keeper caught a glimpse through the darkness of something showing up black in the whiteness of the foam; it was another man; and leaving his mates to get the rescued men over the ice-pile, the keeper rushed into the surf and seized him. At the same moment he saw two others blacken up in the water close by him, but was powerless to assist them, and they were among the three lost. In the violent endeavor now made to haul the dying sailor from the undertow, the brave keeper came near losing his own life. The man caught hold of him with the terrific grip of the drown-

ing, and at the same moment he lost his foot-hold and was thrown down by the fierce current. Embarrassed by the heavy body clinging to him, he was unable to get up again, and was in imminent peril of his life. Fortunately the next sea washed them up against a large pile of ice, which the keeper seized, and, with a desperate effort, regained his feet, and made for the shore, dragging the man along with him. At the same moment one of his crew came to his assistance, and they reached the beach in safety.

The man last saved proved to be the officer in charge of the steamer's boat. He and the eight others rescued were carried to a cottage on the beach, and promptly cared for. Of the twelve persons in the boat, three were swept away and drowned. Of the nine rescued, it is probable that none would have gained the shore, cumbered as they were by their heavy garments, and whelmed in the enormous surf and floating ice-cakes, but for the resolute gallantry of the keeper and his men.

The bodies of the three sailors drowned were carried further up the beach by the current, and were discovered on the evening or night of that day by the patrols of station No. 1 (Sandy Hook, N. J.). They were found at different periods of the night in the undertow, by means of lanterns, and brought ashore by the patrolmen. This fact, as well as the early discovery of the *Amérique*, well illustrates the splendid vigilance of the patrols.

At four o'clock, an hour previous to this incident, the crew of station No. 4 had arrived with their surf-boat, which they had laboriously hauled by hand along the slush and mud of the turnpike, and had endeavored to launch, an effort baffled by the high surf and the ice-cakes, as already stated. Keeper West had dispatched them back for the mortar apparatus, sending at the same time for the boat belonging to his station. By five o'clock the mortar apparatus and life-car had arrived, two trips of the station hand-cart having been required to bring it complete upon the ground. Two hours had been spent in this toilsome pulling and hauling in the mire and darkness, and everything was now ready for direct operations. The interim had been signalized by the rescue of the men from the surf.

The first shot fired from the mortar failed by the breaking of the spiral wire from the cord. The shot-line was then attached directly to the ball, and the second shot was fired and successfully carried the line over the vessel between the main and mizzen masts. The hawser and hauling-lines were then attached to the shot-line and hauled on board, together with a bottle containing directions for making the hawser fast on board the steamer. As none of the officers of the steamer appeared to well understand English, these directions seem to have been imperfectly understood, and considerable delay attended the effort to get the hawser and hauling-lines properly placed on board the vessel. Finally, daylight having appeared, the boat belonging to station No. 3, which had meanwhile been brought to the ground by a team, was launched,

with the view of boarding the vessel and properly fixing the hawser. The dangerous breakers and currents near the steamer frustrated the attempt, but the boat managed to get sufficiently near to enable instructions to be shouted to those on board, and at length the ropes were got into proper position for working the life-car.

Several hundred spectators had meanwhile assembled on the beach, and the operations of the life-saving crews were conducted amidst much excitement and applause. By the first trip with the life-car two passengers, Mr. Cornell Jewett and his wife, were landed. The regulations of the life-saving service provide that the lives of persons on board a wreck are of paramount concern, the saving of property being a secondary and subordinate consideration, and as considerable baggage had been sent in the car with this couple, surfman Cook, of station No. 4, went off in the return car to conduct operations. Under his direction the hauling-line of the life-car on board was attached to and worked by the hoisting-engine of the steamer, while the shore-line was hauled by hand. The labor was actively begun, and by noon numerous trips had been made from the vessel, the life-car carrying on each trip several persons, till 54 passengers, among whom were women and children, and 46 of the steamer's crew, were safely landed. The baggage of the passengers, the mails, and two boxes of gold bullion, weighing 275 pounds each, were then brought ashore in the same manner.

The crews of stations Nos. 3 and 4 worked together like one man. An instance of the toils imposed upon life-saving crews is afforded by the fact that these men were occupied in their severe and heroic labors all day until five o'clock, never pausing for food, or to change their drenched clothing.

Their labors with the *Amérique* did not end with this occasion. The steamer was eventually got off by the Coast Wrecking Company, but in the interim (February 23) she was subjected to a fearful storm, which drove her twice her length to the south and fifty yards nearer the shore, and during the whole of that night she pounded so heavily that the men upon her decks could not keep their feet. There were 200 souls on board, wreckers and seamen, and for a while it was feared that there would be a repetition of such a disaster as befell the *Circassian*. At this scene the crews of Nos. 3 and 4 again appeared and assisted the employés of the wrecking company in safely landing all on board.

A gratifying incident of the affair of the *Amérique* was the reception of a letter from her captain expressing his sense of the services of the life-saving crews, and accompanied by a testimonial in money from the agent of the company.

WRECK OF THE MARGARET AND LUCY.

The *Margaret and Lucy* was a three-masted schooner of 400 tons burden, laden with guano, phosphate, and brimstone, valued at \$16,000, and her cargo at \$20,000. She was commanded by Benjamin Wicks, and

had a crew of six men. She was owned at Middletown, Conn. On the 2d of March, 1877, she sailed from New York, bound for Charleston, S. C., and on the evening of the same day she was stranded in a mysterious manner on a bar from 300 to 400 yards from the shore, opposite a point about one and a quarter miles north of life-saving station No. 13, Tom's River, N. J., and almost immediately broke up in small pieces.

The circumstances of this singular shipwreck appear to be as follows:

The wind that day had been blowing freshly from the southward, or directly along the line of the coast. The day was rainy, with occasional thick weather. At sunset, although the wind continued to blow along the shore, it was remarked as something peculiar that the sea suddenly increased and was unusually heavy, and the surf ran high.

As the wind was blowing straight along the line of the coast, there was little probability of any vessel driving on shore. Nevertheless, a strict lookout had been kept by the keeper, Stephen Bills, of station No. 13. At 6.30 the watch had scanned the coast for miles on either side of the station, and seen nothing unusual.

At eight o'clock patrolman William Miller, of the regular watch, left the station upon his beat of two miles toward the north. The night was very dark, the sandy beach was drenched with rain, and the walking was soft and tiresome. The patrolman had trudged on about 300 yards when he saw, at some distance up the beach, a bright light which he concluded was a torch. He watched it for three or four minutes, as he plodded on, when it suddenly went out. He had gone about 200 yards further when he saw two lights, apparently about three feet apart, one, which was green, above the other, which was red. Perplexed at the appearance they presented, he continued his course to a point abreast of them, about a mile and a quarter from the station. The lights were perfectly stationary, about three or four hundred yards from the shore and well up above the water. Nothing could be seen denoting the presence of a vessel. The patrolman nevertheless burned his red Coston light. There was no answering signal or voice, and he then hurried back to summon the crew of the station to render assistance.

He arrived at 8.55. The surf was running over the pitch of the beach, and the rain had made the sand so soft and loose that it was extremely difficult for the men to haul the mortar apparatus and life-car and gear over by hand. Keeper Bills, therefore, promptly sent a surfman a mile distant for a team of horses, and himself and four men hurried to the place where the lights had been seen. When he arrived the appearance had changed. No vessel was discoverable, but there were now a white and a green light about forty feet apart, both visible above the surf and well clear of the sea. The keeper fired a red Coston light and then a rocket. There was no response made. The keeper then hastened back to the station with the others, leaving surfman Vincent Applegate behind to watch the lights.

Twenty or thirty minutes afterward surfman Applegate saw the lights suddenly disappear. There were no cries nor voices. A minute later he heard a loud crash from the sea.

This crash signified that a vessel had been there and had just fallen to pieces. Shortly afterward the keeper and his men arrived with the team dragging the mortar apparatus. All was then over.

While patrolman William Miller was running back to report what he had seen, patrolman Britton C. Miller, of the adjacent station, No. 12, then marching southward on his beat, saw his lantern rapidly receding at about a mile's distance. He did not observe the lights out at sea, but judging by the receding lantern that something was wrong to the southward, he hurried back to his own station. On the way he found in his path a draw-bucket, an oar, and a piece of carved woodwork, fragments of the wreck already breaking up which had followed him, carried northward by the swift current. No part of the wreck was found within half a mile of the place where Miller and Applegate had stood, but for ten miles to the northward the coast was strewn with the fragments. The smallness and rottenness of the pieces which came ashore showed the utter unseaworthiness of the vessel. It is probable that she was leaking badly and that her master had attempted to beach her. Her draught being only about 13 feet, she should, if she had been in reasonably sound condition, have gone over the bar and well up on the shore. But the extreme decay of a fragment of her bottom, to which the center-board case was attached, and the lower part of which was entirely rotten, makes it probable that when she first struck the bar her rotten bottom instantly separated from the rest of her hull, which was immediately submerged. The sinking of her hull in this manner would account for the patrol seeing nothing but the lights. These, of course, were the red and green lanterns hung, as required by marine regulations, in her rigging. The appearance of the green light above the red was undoubtedly caused by her having careened to her port side when she sunk, thus making the light on her starboard side show higher than the other. The torch-light first seen was perhaps burned when she first struck the bar. In the instance of the lights as seen by the keeper, which were then a green and white light, apparently forty feet apart, it is probable that the red light to port had become submerged by the vessel continuing to heel over, leaving the green one on her starboard side still visible, and that the white light was that of her sky-light or binnacle.

The schooner must have sunk and fallen apart so speedily as to give her master and crew no chance for their lives. The seven men on board appear to have perished instantly, without having had time to even attempt to take to the vessel's yawl-boat, which was afterward found upon the beach with its oars lashed to the thwarts. Their bodies were picked up on the 3d and 4th of March, two days after, on Squan Beach, 12 miles distant, borne thither by the current.

These four wrecks are, as already stated, the only ones accompanied by loss of life which have occurred during the past year within the line of the life-saving operations; and it has previously been remarked that the fatality incident thereto is solely chargeable to casualty, and not to the fault of the service or its agents. The loss of these thirty-nine persons properly goes upon the mortuary record of the establishment as a matter of statistical form, and it is offset by the record, of which the service has reason to be proud, of the great number saved within the year. Of the whole number of persons exposed upon stranded vessels, the loss is barely more than $2\frac{1}{2}$ per cent. When the frightful marine holocausts upon our shores prior to the reorganization of the Life-Saving Service are remembered, the triumph of this reduction of the former sum of fatality will be appreciated. This triumph is augmented by the consideration that the faithfulness of the life-saving crews and the efficiency of the apparatus employed were such last year as to really leave the service without one death for which it is answerable. The result foreshadows the time when through the added force and potency of perfected organization, and the invention of collateral means to prevent wrecked sea-farers from accomplishing, through ignorance or folly, their own doom, life upon stranded vessels will be almost safe throughout the entire domain of the service. That life thus exposed will ever be absolutely safe, it would be presumption to prophecy. The law of things ordains some percentage of failure in all schemes, however carefully framed. After the best shall have been done that can be—after the anxious thought and toil of many years, with abundant means, shall have brought the service to the very acme of its efficiency, even then, in some untoward hour, the fault of a trusted agent, the defect of an implement—a patrolman failing to keep his watch upon the midnight beach, an oar snapping in the strong hand of the steersman—may cause catastrophe. The most daring hope can only contemplate the reduction of disaster to its minimum. If after earnest endeavor has wrought its utmost, calamity should fall upon the service, we can only trust that, amid the exasperations of the hour, when accusation and censure are loud, if the time when it failed the mariner must be brought into bitter prominence, thoughtful men may also remember its long years of steady usefulness.

The subjoined table gives a summary of results for the last six years (the period since reorganization) in the field of the life-saving operations. No array of terms could add prouder significance to these dry figures. They form the story of great numbers of lives saved, of shelter given the shipwrecked, and vast amounts of property rescued from destruction. Where this protection is ample, the annual horrible loss and ruin have well-nigh ceased and become a part of the tradition which darkens the memories of old dwellers on the Atlantic seaboard. These great results, moreover, have been accomplished despite the limitations and difficulties incident to narrow means and unperfected organization.

Considering the magnitude of the tasks to be performed and the interests to be protected, the appropriations have been small. Yet, with choice straitened by the necessity of economy, the appliances selected for practical use in life-saving have been such as to deserve and command the award of the Centennial Exposition. With only the means for affording a small stipend for their recompense, life saving crews have been enrolled whose skill and bravery upon occasions of shipwreck have won respect for themselves and honor for the nation, and whose patrols, no matter what the night or weather, walk the beach from dark till dawn, on the lookout for imperiled vessels, from Maine to Hatteras. Keepers of approved character and courage, natural captains of men, masters of boats, faithful custodians of the public property, have been found to assume the grave charge of the lonely stations and retained, even upon the paltry sum of \$200 per annum, to keep watch and ward for sea-farers; only recently, as must be sadly owned, beginning to drop away one by one from their unthanked and unpaid trust, leaving their places to be filled by untried and, it is feared, inferior men. Station-houses have been built and furnished along the whole coast-line of disaster upon the Atlantic and the Lakes; telegraphic connections from many of these have been made through the wires of the signal-service for instant communication to headquarters from wrecks; wreck-statistics of the most absolute value have been collected and tabulated yearly; and, in a word, the scattered and unformed beginnings of former years have been brought together in coherence and developed into the potency of organization. The results as expressed below are the pledge of ampler and better, if the service receives the legislative aid it merits.

GENERAL SUMMARY

*Of wrecks which have occurred within the scope of life-saving operations, from November 1, 1871, (date of re-organization,) to close of year fiscal ending June 30, 1877.**

Total number of disasters.....	407
Total value of vessels.....	\$6,921,394
Total value of cargoes.....	\$4,212,012
Total value of property saved.....	\$6,967,947
Total value of property lost.....	\$4,129,459
Total number of persons on vessels.....	4,730
Total number of persons saved.....	4,650
Total number of lives lost.....	80
Total number of persons sheltered.....	959
Total number of days' shelter afforded.....	2,867

* It should be observed that the operations of the service during this period have been limited as follows: Season of 1871-'72, to the coast of Long Island and New Jersey; seasons of 1872-'74, to the coasts of Cape Cod, Long Island, and New Jersey; season of 1874-'75, to the coasts of New England, Long Island, New Jersey, and coast from Cape Henry to Cape Hatteras; season of 1875-'76, coasts of New England, Long Island, New Jersey, coast from Cape Henlopen to Cape Charles, and coast from Cape Henry to Cape Hatteras; and season of 1876-'77, all the foregoing, with the addition of Florida and the Lake coasts.

ESTABLISHMENT OF STATIONS.

In addition to the stations which were incomplete at the date of the last annual report, and have been hereinbefore mentioned as having been completed, equipped, and put in operation during the past fiscal year, a life-boat station at Buffalo, district No. 8, a life-saving station at Grosse Point (Evauston), district No. 10, and three life-boat stations in district No. 11 (Pacific coast), located respectively at Neah Bay, Shoalwater Bay, and Cape Disappointment, have been erected, and those at Buffalo and Grosse Point have been fully equipped and opened for the present season. The three stations on the Pacific coast are now receiving their equipments, and will soon be ready for service.

An excellent site for the life-boat station authorized to be established near San Francisco has been obtained through the courtesy and kindness of the city authorities of San Francisco within the limits of Golden Gate Park, just south of the Cliff House, and contract has been entered into for the construction of a creditable building. By the terms of the contract, the station is to be completed by December 23, 1877.

The act of June 20, 1874, authorized the establishment of four other stations on the Pacific coast, one at Cape Arago, one at Humboldt Bay, one at Point Reyes, and one at Point Concepcion. For the construction of the two former stations the Department has been unable to obtain proposals, after repeated advertisements. In view of the need of these stations, however, another effort will be made in the spring to effect their construction, and if a contract upon fair terms cannot be made, it is proposed that the acting superintendent of the district shall undertake the work. Titles to the sites for the stations proposed for Point Reyes and Point Concepcion are still unsecured, and for the former place all effort has been abandoned. There is no suitable locality in that vicinity except on Drake's Bay, the land bordering on the coast of which is held entirely by one owner, who refuses to permit the erection of a station thereon, except under conditions which it would be improper for the government to accept. The matter having been brought to the attention of the Secretary of the Treasury, he last year informed Congress of the facts in the case, and recommended that authority be given for the establishment of the proposed station at Bolinas Bay, a few miles south of Point Reyes, which was considered, by the commission appointed to select sites for the stations authorized to be established on the Pacific coast, as preferable for the location of a life boat station, for various reasons set forth in their report upon the subject. This commission, in fact, in expectation that the authority above referred to would be granted, selected an excellent site, and obtained from the owner an agreement to convey the same to the United States, if required within a certain period, upon the payment of sixty dollars. The time mentioned has long since expired, but it is believed that the title can still be obtained for the sum named. The locality is quite a dangerous one, and several disasters have

occurred in its vicinity; and it is hoped that the desired authority for the establishment of the station at Bolinas Bay will not be withheld when the matter is again presented to the attention of Congress.

As to Point Concepcion, renewed efforts are being made to obtain a title to the site there selected, which it is hoped may be successful.

Several of the old stations on the coasts of Long Island and New Jersey have for some time been in such condition as to require the substitution of new buildings. Most of these were originally constructed in 1849, simply as boat-houses; being intended merely to protect a boat and some few other articles, which, upon the occurrence of a wreck, would be of service in the hands of people in the vicinity, who might reach the scene in time, and volunteer assistance. When the reorganization of the service was undertaken in 1871, these buildings were examined, and being found comparatively sound, it was thought that by erecting small additions to them they might answer the purposes of the service for several years; and this was accordingly done. The crews, however, have been obliged to live in very uncomfortable quarters in the lofts; and the additional apparatus that has been lately added to the stations has crowded them beyond endurance. To make them habitable at all, further additions are necessary, as well as considerable repairs. The locations of many of these houses, moreover, have become unsuitable, on account of the encroachment of the sea, and for other reasons. An examination of the stations on the coast of Long Island revealed the fact that new ones were required at Coney Island, Southampton, Bridgehampton, Amagansett, and Montauk Point, and that it was advisable to change the location of all these stations, except the one at Amagansett. Suitable sites having been obtained at Southampton and Bridgehampton, and it being indispensable that the new stations should be completed for use during the present winter, proposals were invited by advertisement, and satisfactory ones being received, the construction of the buildings was immediately commenced, and is about completed. The building of the other stations proposed will now have to be postponed until next season. The older stations on the coast of New Jersey have received such temporary repairs as will make them habitable during the winter, and it is proposed next year to rebuild them wherever it may be necessary.

The station exhibited on the Centennial grounds last year has been transferred to Cape May Point, N. J., between the old stations Nos. 39 and 40. It has taken the designation of No. 40, the old station of that number (Bay Shore) being allowed to remain for the protection of the old boat and apparatus, which may, on occasion, be convenient and useful. No expense is incurred in the maintenance of the latter station, as no crew is employed there, and it is cared for by the keeper of the new station. It is now designated No. 41.

EXAMINATION OF KEEPERS AND CREWS.

The usual examination of the keepers and surf-men of the life-saving stations by a board of two officers of the Revenue Marine, familiar with

the nature and equipments of the service, and a medical officer of the Marine Hospital Service, was commenced soon after the rendezvous of the crews at their stations for the active season. These examinations are made each year as early in the season as possible, and are of the greatest use, not only in weeding out unworthy members of the crews, but in bracing and animating the others for the serious and arduous duties required of them as sentinels of the winter coast and guardians of the lives of stranded sea-farers.

Every station visited was inspected during the progress of the examination, and the keepers and crews were carefully instructed in the method of resuscitating the apparently drowned.

In district No. 1, the keepers and crews were all found well qualified, and the stations, with a single exception, where the board found it necessary to enjoin a stricter attention to cleanliness, were in a very creditable condition.

The keepers and crews of the stations in district No. 2, with the exception of a single keeper, whose station was reported in a very unsatisfactory state, both as to cleanliness and discipline, were found well qualified, and the several stations, with the exception named, were in excellent condition. The delinquent keeper, upon the recommendation of the board, was promptly removed.

In district No. 3, the stations were generally neat and orderly; but at a few there was a lack of proper discipline, and in some cases the keepers were not alive to the important nature of their charge. The main fault observed in these instances was the loose and unsystematic manner in which they permitted their crews to perform the duty of patrolling the beach between the stations during the night, evading, as far as possible, the strict intention of the regulations in reference to this cardinal feature of the service. It was found, also, that one or two of the keepers absented themselves much of the time from the stations, leaving them in charge of some member of the crew. These delinquencies caused three of the keepers to be recommended for dismissal, and other persons were appointed in their places. The surfmen were generally found qualified, and of the 196 examined it was only necessary to remove 4.

In district No. 4, the keepers and surfmen of the stations where crews are maintained were all examined. These comprised 259 men, 37 of whom were keepers. Of the latter, 7 were recommended for removal; 3 for incompetency—in one case resulting from old age and consequent debility—and 4 for frequent absence from their stations, lack of interest, inattention, and neglect of duty. Of the 222 surfmen examined, only 2 were found incompetent. A marked improvement is here manifested over the preceding year, in which 13 keepers and 32 surfmen were rejected. This district is perhaps the most important in the service, and the great value of the thorough sifting it underwent by the action of the preceding board of examiners, and the necessity of employing only the

most competent men, can be appreciated when it is recollected, as shown in the foregoing statistics of disasters, that during the last season there were 40 wrecks within its limits, or an average of more than one to each station. The creditable conduct of the crews on all occasions of disaster, and their success in saving life and property, attest the general efficiency of the district during the season.

The condition of district No. 5 the board of examiners found quite unsatisfactory. Of the 8 keepers examined, 5 were incompetent; and more than one-fifth of the surfmen were unqualified for their duties. At many places evidences of neglect and indifference were abundant, and the new apparatus, in some cases, had not been arranged and put in order for use, although it had been for some time at the stations.

The board endeavored to impress the keepers and crews with a full sense of the grave responsibilities resting upon them, and to stimulate them to efforts in acquiring proficiency in their duties. They also made diligent inquiry into the causes of the degraded state of the district. They found that it resulted generally from an utter misconception on the part of the superintendent of his duties and responsibilities, and that this misconception had been formed in his mind by the efforts and representations of certain small local politicians, some of them holding petty official positions, who had impudently claimed to represent the wishes of the Department and had contrived, by adroitly practicing on his fears, to secure the nomination and retention of incapable persons at the stations, both as keepers and surfmen, thereby producing a general maladministration of affairs in the district—their aim being to advance their own paltry political interests through the patronage of these parasites and retainers. They had succeeded in obtaining control over the mind of the superintendent to the extent of making him believe that the security of his position depended upon his compliance with their desires—a belief fostered by frequent endeavors which were actually made for his displacement by local political factions.

The district was one newly organized, and the superintendent had been selected on account of his well-known professional ability, and because he was believed to be the most capable person available for the office. He had on several occasions distinguished himself for his gallantry in saving human life, and had been awarded a medal for his heroism.

The board of examiners declared that, after they had corrected the error of belief into which he had been led, the pledges this superintendent gave, and the voluntary exertions he made for the reform of existing abuses, evinced a sincere disposition to enter upon a better course of administration; and after a careful review of all the circumstances connected with the evils they had discovered, they recommended his retention in the service, stating that "it would be extremely difficult, and

perhaps impossible, to find, in the vicinity of the coast-line embraced in the district, a more suitable person."

Upon the receipt of their report at the Department, it was ordered that the incompetent keepers should be displaced, and that an officer should be detailed to visit each station in company with the superintendent, who showed every disposition to heartily co-operate in the measures for the reorganization of the district. Lieutenant Walton, of the Revenue Marine, whose familiarity with the requirements of the Life-Saving Service eminently fitted him for the duty, was accordingly detailed to execute the trust. The work was thoroughly performed, and in connection therewith full instructions were given the crews in the use of all the appliances of the stations, and in their general duties. In the latter respect it was found, however, that, in compliance with the caution previously given them by the board, they had so used the intervening time as to acquire considerable proficiency. The district was thus placed upon as effective a footing as could be expected of one so recently organized, and rendered a good account of itself during the active season.

The result of the examination of last year in district No. 6 was exceedingly gratifying, considering the condition which the examination of the previous year had developed, when the stations were found in a little better state, if any, than those of district No. 5 before reorganization. The marked improvement of the service at the stations within a single twelvemonth, demonstrates the indispensability of these examining-boards. The board of 1875-'76 found that two of the ten keepers in the district had no knowledge whatever of nautical matters, one being a blacksmith, and the other a school-teacher. A third keeper had but slight familiarity with the work required of him, and a fourth was totally disqualified physically. At one station there were but two competent persons in the entire crew. In various instances those enlisted as surfmen were without skill or experience in the use of boats, and there were several instances of physical disqualification. In pleasing contrast to this state of affairs, the board of 1876-'77 found but one incompetent keeper in the district, and only two unsuitable surfmen. This keeper was one of those rejected the year before, whose place it had been impossible to find a competent person to fill at the pitiable compensation allowed by law, and the two surfmen referred to were members of his crew. A person believed to be competent has since been secured in place of this keeper.

The superintendent of this district has been indefatigable in his efforts to perfect the discipline and efficiency of the stations under his charge, and the district now ranks well with the older ones. Its demoralization in 1876 is referable to the same cause which operated so injuriously in the fifth district—the temporary control of its affairs gained by petty local politicians, whose aim was to subordinate the service to their personal ends; their method being to endeavor to pack the stations with their own creatures, without the slightest respect to use or competency. The success of these maneuvers would at once involve the utter

ruin of the service; for what stranded crew, clinging to the shrouds of a vessel going to pieces in the breakers, could hope for succor in the hour of their bitter extremity, from life-saving stations recruited from the cross-roads grocery? It would be indeed an evil day when the wrecked sea-farer could look for help only to the puppets of local politics, where once his reliance was upon the heroic groups of tried surfmen. There is, however, abundant cause for gratulation, that not in a single instance have these attempts upon the integrity of a noble service, involving the paralysis of its strong arm of deliverance for imperiled mariners, proceeded from any representative man in our State or national politics, nor from any aspirant of whatever party complexion, for any office of elevation or consequence. They have indeed been signally unconnected, as they well might be, with the struggles of political principle or the rivalries of popular candidates. But, considering the criminal mischief and disaster their success would involve, they acquire a deeper baseness from the circumstance of their having been invariably resorted to for no better purpose than to further the election of some local nobody to an office of no higher dignity than that of town-constable or pound-keeper.

It must not be understood that the disposition of these individuals to tamper with the Life-Saving Service has been confined to the locality embraced by the 5th and 6th districts. On the contrary, they have obstructed and retarded the effective organization of nearly every new district. Any public establishment seems to be regarded by them simply as something which may be turned to their personal account, and prostituted and polluted for their petty ends. In respect to the Life-Saving Service, they would probably consider it very hard fortune to find themselves gathered in imminent peril upon some wreck, swept fore and aft by the winter sea, condemned to look for deliverance to life-saving crews of their own choosing. In such an event, deprived of the hopes of aid from surfmen, and dependent upon the cripples and incompetents with whom they would fain cram the stations, the experience, if they survived it, might teach them a needed lesson. To all who have at heart the interests of the Life-Saving Service, there is a consolation in the fact that the advantage gained by these intriguers, through their schemes of intimidation, assumption, and chicanery, has ever been brief; for immediately upon any news of their success reaching the Department, measures have always been promptly taken to make their labors perfectly ineffectual.

The work of the board in the 6th district completed their action on the Atlantic coast, it not being considered necessary to examine the keepers of the houses of refuge in district No. 7, in view of the simple nature of the duties required of them.

The different dates at which the few complete life-saving stations in the Lake districts were finished and went into operation, made it impracticable to send to them a board of examiners. It was also impracticable

to collect the volunteer crews of the life-boat stations for the purpose, there being no authority of law to pay them for the time examination would involve, and which, being poor, and dependent upon fishing or day's labor for subsistence, they could not afford to give gratuitously. There is little danger, however, of incompetent men being enrolled as members of these crews, inasmuch as they are paid only for each occasion upon which they save human life, and there is no inducement for the keeper of a station to encumber his boat, upon an expedition to a wreck with men who would endanger his own safety, nor much likelihood of inexperienced men volunteering for such service. Much pains has, however, been taken to place the Lake stations on a thoroughly efficient basis, and for this purpose each district has been visited during the season by either the General Superintendent or the inspector, who have given the superintendents and keepers a thorough course of instruction in the use of the apparatus and in all other matters relating to their duties. Until these visits nothing was practically known upon the Lakes of the method of effecting communication with wrecked vessels by the use of the shot-line, or of the manner of taking persons ashore with the life-car or breeches-buoy. These are now thoroughly understood.

At these visits, also, the keepers and crews of the life-saving stations were drilled and exercised, and examined physically, as were also the keepers of the life-boat stations. In these examinations the aim has been to fill the vacancies in keeperships by the promotion from the ranks of the surfmen, of those best qualified, when such were willing to accept the additional responsibility without increase of pay, which the Department is unhappily not able to give them.

IMPROVEMENT IN LIFE-SAVING APPLIANCES.

The effort for the improvement of the appliances in use for saving life from shipwrecked vessels, which the Department has steadily made since the reorganization of the service, have been continued during the past year, and have been rewarded with important results.

REDUCTION IN WEIGHT OF APPARATUS.

One of the most serious obstacles to the prompt establishment of connection with stranded vessels in most localities along the sandy beaches of the greater part of our coast, in cases which do not admit of the use of the boat, is the difficulty of transporting to the scene of disaster the requisite materials for effecting a rescue. These have generally consisted of the following articles:

One 5-inch éprouvette mortar, weighing with its bed and three balls about 360 pounds.

One shot-line, weighing, together with the faking-box in which it is carried, about 80 pounds.

One set of 2½-inch hauling-lines, or a whip, 250 fathoms, with block, weighing about 300 pounds.

One 4½-inch hawser, weighing about 600 pounds.

One crotch and sand-anchor, weighing about 125 pounds.

One life-car weighing (smallest size) about 225 pounds.

These articles make an aggregate of nearly 1,700 lbs. All this had to be dragged in the roughest weather and in the worst possible condition of travel, through mud, snow, and yielding sand, whatever the distance might be, between the nearest station and a point directly opposite the stranded vessel. When it is remembered that a majority of the stations are in isolated localities, remote from settlements and where little or no volunteer aid is obtainable, and that the crew of a station, including the keeper, consists of but seven persons, the disadvantages arising from delay and the exhaustion of the men before the moment is reached for their crowning effort, will be appreciated. This difficulty will hereafter be considerably lessened; the substitution at the outset of operations at wrecks, of the breeches-buoy for the life-car, having been entered upon during the past year. The former appliance, weighing but 21 pounds and requiring cordage for working of much smaller size and weight than that used with the life-car, leaves the car, in case it should be needed, to be later brought to the scene by the crews of adjacent stations who may have been summoned and had time to arrive. In this manner, a reduction in the weight of the indispensable impedimenta to the extent of 550 pounds will be effected, beside the reduction in the weight of the ordnance, and the shot-line and boxes, hereafter noticed; and this, notwithstanding the increased range of the shot-line which has been attained, has made it necessary to considerably extend in length all the cordage employed.

In cases of extreme haste a still greater reduction is made by omitting the hawser, and performing the whole operation by the use of the whip alone, though this involves more labor and difficulty. It may be here observed that the breeches-buoy is as sure an appliance for saving life as the life-car, and that the advantages which the latter offers are, that it admits of the landing of several persons at once in a dry condition, this being an important consideration in the case of invalids, young children, and aged persons, while the buoy can take but one person at a time, who is generally exposed to the weather and waves.

Very many of the vessels which are driven ashore on our coasts are engaged in the coasting trade, rarely carrying passengers, and with crews of from 5 to 10 persons, for whose rescue the breeches-buoy answers every purpose, and the heavier apparatus is not necessary. In cases of vessels with a large number of persons on board, the breeches-buoy, upon its arrival, is immediately employed, and upon the arrival of the life-car and the adjacent crews subsequently, the means of deliverance are multiplied.

With a view of still further lessening the weight and bulk of the apparatus necessary to be conveyed from a station to the scene of disaster and of facilitating the process of rescue, efforts have been made to obtain a quantity of line-carrying rockets from the several countries of Europe where they are used. None such are manufactured in this

country, (although at one time a few were made and experimented with, the results not being quite satisfactory,) but considerable attention has been paid to this means of effecting communication with wrecked vessels in various foreign countries, particularly in England, Germany, and Russia, in each of which certain important results have been attained by experiment.

The rocket in use in England for the purpose referred to is known as the Boxer rocket, being an invention of Colonel Boxer, of the British army, and has a maximum range of about 410 yards. Its weight, with the several minor articles essential to its use, is about 70 pounds.

The rockets in use in Germany are manufactured at the Government Fire-Works Laboratory, at Spandau, and are of three varieties: two of them termed "Rescue-rockets," measuring, respectively, 8 centimeters (3.15 inches,) and 5 centimeters (1.97 inches) in diameter, and carrying lines about 550 yards and 330 yards, respectively; and the third an anchor-rocket, having the form of a four-armed anchor, and carrying the line about 500 yards, intended for cases where stranded persons are not in a condition to assist in their own rescue. In such cases a boat must be sent to them, in order to get which through the surf an anchor-rocket is thrown out from the land over and beyond the surf; the anchor fastens itself in the bottom, and constitutes a sustaining-point for the line by which the boat, assisted by rowers, is drawn from the shore through the breakers. The 8-centimeter rescue-rocket weighs 19 kilograms (41.89 pounds), the 5 centimeter rocket 7 kilograms (15.43 pounds), and the anchor-rocket 21 kilograms (46.30 pounds), in addition to the frame, &c., required for their use.

The special feature of the Russian rocket, so far as is here known, is its range; reports of experiments received showing it to have succeeded in carrying a line five hundred and seventy-two yards. The weight of the rocket is stated at 28 pounds.

Opportunity having been afforded by the British government, this Department has purchased \$3,000 worth of Boxer rockets and the apparatus for using them, together with some other articles of similar utility.

A limited number of the Rescue and Anchor rockets have also been procured through the Department of State from the governments of Germany and Russia. There has been some delay in obtaining these articles, which are now understood to be on their way. They will be distributed during the winter at the stations where they are most needed.

While all these rockets possess the decided advantage of portability, and two of them, at least, as great a range as is on most occasions requisite, there are many objections to their exclusive adoption, among which may be mentioned the difficulty of keeping constantly a sufficient supply on hand, owing to the fact that they have to be imported from foreign countries, and, being combustible, it is with considerable difficulty and expense that their transportation can be secured; while, on account of their liability to deterioration from atmospheric influences,

their great cost, and the fact that when once used they are of no further avail, they cannot be said to be economical. In a majority of cases, thanks to the effectiveness of the patrol system, there is plenty of time between the discovery of a stranded vessel and her breaking up, to reach the scene and effect the rescue of those on board, and sufficient strength and endurance in our hardy crews, notwithstanding the weight and bulk of the apparatus with which they are encumbered and retarded. Considering this and the great difference in expense, the chief reliance for effecting communication by projectiles with such vessels, in this country, must be upon mortars or guns.

The essential object in this respect has consequently seemed to be to obtain the greatest possible range with a gun or mortar of the least possible weight; and with this view the efforts referred to in the last annual report of the operations of the service have been continued during the past year.

EXTENDING RANGE OF SHOT-LINE.

It will be recollected that some time ago it was determined to obtain for a specially dangerous point on Cape Cod, (Peaked Hill Bar), a gun which should effect as great a range as possible, and for this purpose Captain Ottinger, of the Revenue Marine Service, was detailed to conduct experiments at the West Point Foundry, at Cold Spring, N. Y., and Captain Merryman, inspector of life-saving stations, was joined with the Ordnance Board of the Army in similar efforts at Sandy Hook, N. J. For the particular point of coast referred to, the weight of the gun was not of so material consequence as the matter of range, and the result of Captain Ottinger's experiments was the attainment of as great a range as could be utilized, with a gun of increased weight invented by Robert P. Parrott, esq., of the Foundry referred to. Two of these guns were purchased and placed, one at the station at Peaked Hill Bar and the other at the relief station a short distance from that locality, and it is believed they will afford as great protection for that dangerous point as is possible. Since then Mr. Parrott and the proprietors of the Cold Spring Foundry have taken a great interest in the solution of the problem in hand, and have voluntarily continued their efforts in this direction, keeping the Department informed of their progress.

Having last February expressed the belief that they could devise a gun of no greater weight than the mortar in general use in the service, with which a greatly increased range could be obtained, and stated that the cost of making an experimental gun and projectile would be but trifling (\$160), authority was given for its manufacture, and in June last it was ready for experiment. The gun is of cast iron, weighing 201 pounds, and has a steel tube or lining six-tenths of an inch in thickness for the bore of a caliber of 3 inches. It is mounted on a bracket carriage of ash, without trucks, and with yellow-metal fastenings, trunnion-plates, and cap-squares; its weight being 65½ pounds. The projectile is cylindrical with rounded ends, is 15 inches long, and lathe-turned

to fit the bore closely. Its weight is 22 pounds, and in one end, which is more pointed than the other, there is a hole through which the shot-line may be passed and fastened. This end projects beyond the muzzle three or four inches, when loaded, according to the charge of powder, and on discharge is reversed by the strain of the line. The wooden carriage recoils more easily on sand or soft earth than the iron bed of the mortar, which, on account of its shape, is easily overturned. In case of breakage, this carriage can be repaired by any carpenter, instead of requiring a new casting, as a broken mortar-bed always does. More accurate aim is also obtained by the lower elevation of which the gun is capable.

At the trial a range of 473 yards was obtained. In view of this gratifying result, twenty-five of these guns were ordered and have been properly distributed.

Messrs. Paulding, Kemble & Co. believe that they can manufacture a gun, to be borne upon the shoulders of a man like a knapsack, which will weigh not over 60 pounds and be capable of carrying a line at least 200 yards, and are now engaged in preparing a design therefor. This would effect a very desirable result, inasmuch as many vessels beach upon our shores within the range named.

In the meantime Captain Merryman and the Board of Ordnance have not been idle. As already intimated, the services of the Ordnance Department of the Army had been enlisted by the Life-Saving Service in connection with these trials. In view of the necessity for careful experiments, an application for the required assistance had been made by the Secretary of the Treasury to the Secretary of War, and the Chief of Ordnance of the Army was instructed accordingly. The matter was placed in the hands of the Ordnance Board, who gave it all the attention possible in addition to their other duties. It was soon found that the subject was of such intricacy and importance as to require the undivided attention of one officer, and at the suggestion of this Department, the Chief of Ordnance detailed Lieutenant D. A. Lyle for the special service, and he is now engaged upon it.

The objects of these experiments are as follows: To extend the range of the shot-line; to determine, if possible, the proper form, caliber, and kind of gun or mortar best suited for life-saving purposes; to reduce the weight of such apparatus to the minimum amount consistent with efficiency; to secure a shot-line of such size, material, and strength as will be most valuable; to determine the kind and quantity of powder to be used, and the charges that can be employed with safety for the several lines; to secure the best form and size of faking-box; and to find the best relative positions for the faking-box and the gun.

A report has been received which states that upon a trial on the 24th of October last, with a 3-inch rifled mortar, prepared for the board above referred to, weighing, together with its bed, but 201 pounds, or 87 pounds less than the mortar in common use at the stations, Lieutenant Lyle ob-

tained the respective ranges of 504 and 604 yards, the range varying with the size and weight of the lines used. With the smaller line he has since obtained a range of over 630 yards with a gun weighing, with its bed, 190 pounds, this being 11 pounds less than the Parrott gun above mentioned, and 98 pounds less than the mortar now in use. Still later, he has obtained the astonishing range of $694\frac{2}{3}$ yards with the same line and a gun of still less weight.

This achievement would seem to indicate that for the average ranges required to establish connection with wrecks, a knapsack-gun of the same weight as that contemplated by Parrott may be made, in which event the difference in weight between it and the rocket will be so slight as scarcely to be of consequence.

It should be stated that the increased range obtained in the above experiments, is partly due to the use of an improved shot-line. When mortars were first introduced at the stations, an ordinary manila cord of good quality was used for a shot-line, being connected with the shot by a spiral annealed wire, designed to take up partially the shock of the discharge. Subsequently an Italian-hemp line was used. It was laid loose to increase its elasticity and render it less liable to breakage, but it presented an increased surface and a rough one to encounter the resistance of the atmosphere. This line is the one which had been employed in England, where the mortar had been many years in use, and was adopted in the service here until time should be found to thoroughly investigate the subject. In 1875, the matter having been somewhat examined, a new line, of the best garden-grown Italian hemp, but close-laid and made comparatively smooth, was introduced with good results. In the mean time further experiments were continued, and the result was the adoption of an improved line, which, by test, gives an increased range of sixty yards. It is made of linen, is braided like a whip-cord, and quite smooth. It is very strong, and the braiding makes it so elastic as to admit of a great stretch before breaking. Two sizes of this line are used, the first being .22 inch in diameter, of 90 threads; the second is a smaller one, of the same material and construction, of .13 inch diameter, of 27 threads. The former is used in all cases where the extreme limit of range is not requisite, it being much more easily handled by the people upon a wreck, and strong enough to haul the whip or hauling-lines directly aboard, while the smaller line is used in extremity, and necessitates the hauling aboard of an intermediate line of larger size, between it and the whip.

MEANS BY WHICH STRANDED VESSELS MAY EFFECT CONNECTION WITH THE SHORE.

In closing this account of the efforts made to increase the distance which a line may be thrown to stranded vessels, occasion is taken to call the attention of ship-owners and masters of vessels to the manner in which they can cheaply and easily co-operate with the Life-Saving Service in this respect, and in many instances obviate the difficulties with which it has to contend. They have only, in one word, to provide

themselves with some simple means of getting a line to the shore from the vessel.

In most cases stranding occurs on a lee shore in gales of wind. A projectile with a shot-line attached to it, fired from the shore toward a vessel, is, in the first place, loaded with the weight of the line, and in the second place impeded by the force of the wind which both projectile and line encounter; hence the range is greatly lessened. A vessel, moreover, presents but a small mark, and if the wind be quartering or gusty it is always difficult, whatever allowance may be made, to aim a shot so as to cause the line to fall over the vessel, as the wind makes the line bow or float wide, and perhaps fall into the sea.

On the other hand, a shot fired from a vessel toward the shore under such circumstances, flies with the wind, and of course will carry a line a much greater distance. Besides, no accuracy of aim is required, as the persons on board the vessel firing the shot have the whole shore for their target:

It will at once be seen how readily the initial difficulty of establishing communication with the shore might thus be overcome, and a line be got from the vessel to the life-saving crews, who could then attach thereto the hauling-lines, and speedily make the necessary connection for the use of the breeches-buoy, the boatswain's chair, or the life-car.

The expense to which this arrangement would subject masters or owners of vessels would be very little, and would be nothing in comparison with the advantage which might be gained in case of danger to all on board from stranding. The cost of an éprouvette mortar, with twelve balls, is \$147, and that of the improved gun with reversible projectile, heretofore mentioned as the invention of Mr. Parrott, is only \$160, completely equipped, to which the added cost of a shot-line, which is \$15, and a faking-box, \$7, make a total cost of only \$182. The Parrott gun is as suitable for firing salutes or making signals as the guns ordinarily placed on shipboard for that purpose, and by substituting it therefor, the means of effecting connection with the shore, in case of shipwreck, would also be provided. Either the mortar or the gun is so easily and simply managed as to be within the capacity of any sailor, and it could be used under any condition of the vessel which would admit of taking advantage of a line received from the shore. All that is needed is the mortar or gun, and a line faked in a box. There is nothing here complicated or liable to get out of order, and the apparatus is so compact as not to require stowing it away to gain deck-room. In view of the advantage to be derived from having it on board for use in many dangerous localities upon our coast, it is difficult to see how any prudent ship-owner or master can allow his vessel to go to sea unprovided with it.

It must not be understood that the recommendation is made to have mortars or guns placed only on board vessels and not also at the life-saving stations. On the contrary, it is not proposed to diminish in any way the number of appliances kept at the stations for the relief of the ship-

wrecked, and it is merely intended to suggest that these might be supplemented by vessels to the extent stated, and used by them under certain adverse circumstances (such, for example, as those of the *Giovanni*, the loss of which some two years ago with all on board, because she stranded just beyond the reach of the shot-line from shore, is within the recollection of all), with more effectiveness than they could be on the shore.

If any owner or master of a vessel should nevertheless judge it inexpedient to provide himself with the simple ordnance, line, and faking-box recommended, there are other, if less effectual, means for establishing connection with the shore in case of wreck, which he can have no excuse for not being provided with. An instance occurred last winter, where the crew of a vessel stranded beyond the range of the shot-line used at the life-saving stations, were rescued through communication effected by means of a line attached to a box which was floated ashore from the wreck. Some means as simple and inexpensive as this should at least be provided by every vessel, and sometimes a cask, a spar, or a box, carrying a line, will sufficiently answer the purpose. The difficulty with such a contrivance, however, is, first, the tendency of any floating body to return seaward after nearing the shore, and, secondly, to be borne diagonally, by the set or current which runs alongshore between the bar and the beach, to a distance which would take out the whole length of the line the vessel might have on board before bringing it to land.

The first difficulty is increased by the weight of the wet line, which encumbers and drags upon the floating body, and several ingenious devices have been employed to counteract it. The best of these, in respect to simplicity and cheapness is, perhaps, the following: A wooden frame is made like a pair of sleigh-runners, about seven or eight feet in length, and held two or three feet apart by connecting bars. The water tank or cask which every vessel carries on her deck for drinking purposes, emptied of its contents and securely plugged, is laid down lengthwise, with the bung uppermost, upon the forward part of this frame and firmly bound to it, thus making an efficient buoy. A foot or two from the after end of the cask is fixed a reel, round which is wound three or four hundred fathoms of small new manila rope, covered, when not in use, with a tarpaulin, to keep it from getting wet. It is better that this rope should be led aft through an eye or a fair-leader at the rear end of the frame, which would make the rope pay off steadily and prevent fouling with the reel or frame. When this contrivance is started from the ship, the cask, which makes it ride buoyantly, and offers a large surface to the wind, causes it to go quickly to leeward; and, as new manila rope will float, the line, as it pays out from the reel, lies on the surface of the water, and does not, by its weight, retard the progress of the cask to the shore. A simple machine like this costs little, can be made by any ship's carpenter, and may often be perfectly effective in making connection with the shore. It obviates the

difficulty created by the line being dragged under water, whereby the float is retarded. The other difficulty, caused by the set or current carrying off the line diagonally, is not so easily overcome, and no simple method for dealing with it can at present be suggested. It does not exist, however, against the gun and shot-line, and this, being the sure means of a vessel establishing connection with the shore, is earnestly urged for the consideration of owners and masters.

LIFE-BOATS AND SURF-BOATS.*

The improvement of the boats used by the service is always a subject of solicitude, and efforts still continue to be made in this direction.

Since the year 1780, when Lionel Lukin, the English coach-maker, first invented the life-boat, no subject has presented to the life-saving institutions of all countries graver problems than that of boats adapted to all requirements of the service. These problems are as yet unsolved, and are perhaps insoluble.

In Great Britain, despite the splendid successes on many occasions of the English life-boat, it has developed on other occasions defects and disadvantages which have caused it to be considered far from satisfactory. It is a matter for congratulation that the attention which has been given to the subject by our own service has developed, in regard to life-saving boats, a higher state of efficiency than is ordinarily supposed upon the coast of this country. Unfortunately, thus far, no boat has been invented that is either able to get from the shore against the power of certain conditions of the surf, or to withstand the fury of seas that wreck frigates. Much has been done, however, and the downright service that has been rendered upon many a remembered occasion of shipwreck by the surf-boats upon our Atlantic coast, and more recently by the life-boats upon the lakes, proves that the subject has not lacked earnest consideration, nor been barren of good results.

The distinction between the life-boat, which, as already stated, is of English device, and the surf-boat, generally employed by our service upon the Eastern seaboard, is probably sufficiently apprehended. It is generally known, for instance, that the life-boat is of great strength and insubmersible, obvious advantages over ordinary boats, which enable her to go out in storms in which the latter could not live, while the surf-boat, also insubmersible, though inferior in strength, is peculiarly fitted by her lightness and great sheer for surmounting the surf on her way to a rescue.

The marvelous deliverances which have been accomplished from time to time by the English crews upon their tempestuous coasts during the century which has elapsed since the original invention of the life-boat,

* It will be understood that the distinction in terms here used is verbal, and employed for convenience in discussion. Strictly speaking, the surf-boat now adopted in our service is also a life-boat, having the quality of insubmersibility and other requisites which give the latter its title.

and which have formed the theme of numerous thrilling narrations by eloquent writers, sometimes prompt the inquiry why the life-boat is not used by our Atlantic stations instead of the surf-boat; and this assumed deficiency in the Life-Saving Service of this country has even been the theme for comment in some of our most intelligent journals. In fact, a certain amount of superstition has grown up around the English life-boat, as around almost everything else remarkable, and spread its contagion into sober narrative and acute criticism. Well-informed writers, in articles of marked ability, have, for example, pointed contrast by telling the public that the life-boat will not capsize. So far is this from being true that in the English service the best life-boats have often capsized, and many members of their gallant crews have lost their lives in consequence. A notable instance was given in last year's report, where, at the wreck of the American ship *Ellen Southard*, at the mouth of the river Mersey, the Liverpool life-boat, considered by many experts the best life-boat in existence, completely pitch-poled, end over end, and three of her crew, and eight of the persons they had rescued from the ship, perished.* In this case, moreover, the boat had been devised for the especial purpose of obviating the liability to upset, which experience had developed in all the other English life-boats, and in her construction the self-righting principle, and other important features, had been deliberately sacrificed to gain this advantage. Indeed, every seaman knows that the vessel must be of huge weight and dimensions that cannot be thrown down by the hurricane or overturned in furious seas; and in respect to the capsizing of life-saving boats, and the sorrowful mortality incident to such disasters, the American service, with its almost exclusive use of the frailer craft, presents a better record than the English. Despite the many terrible occasions at which the surf-boat in use at our stations has ministered on our coast, but a single instance is recalled where its employment has resulted in loss of life. This was at the wreck of the Italian bark *Nuova Ottavia*, as told in the last report, where the surf-boat was overset and her crew were lost, together with several of the sailors they had taken in from the vessel. Even here, the disaster, which took place in the darkness of the night, appears to have been rather caused by some mysterious accident than by any fault in the boat. At all events, the case is solitary. In all other instances, the masterly control of our surfmen over their buoyant shell appears to have countervailed the material advantage of the English masterpiece.

*In fact, the instances are numerous. In 1849 the South Shields life-boat, which was not self-righting, was lost with a crew of twenty pilots. The boats at Lytham, Carnarvon, and Rhyl were all capsized, and in each instance several members of their crews were lost. In 1857 the Point of Ayre life-boat capsized, and her crew of thirteen men perished. In 1861 the Whitby life-boat capsized, and twelve out of her thirteen men were drowned. Three of the Beeching self-righting prize life-boats were upset and several lives lost. This record might be considerably extended. During the twenty years between 1852 and 1872, thirty-two of the self-righting boats appear, by the record, to have capsized.

There are several varieties of the English life-boat, though the kinds are but two. The first, which is used by the Royal National Life-boat Institution, and which is perhaps the best, is self-righting and self-bailing. The second is not self-righting, though it is very difficult to upset, and is insubmersible.

The life-boat is, in its construction, a compromise of conflicting requisites. Almost every advantage it possesses represents the total or partial sacrifice of some desirable quality. The largest of the self-righting and self-bailing boats are 40 feet long, 10 feet 4 inches broad, 5 feet deep amidships, and are propelled by twelve oars. They have great stability in the water, effected partly by breadth of beam, which impairs their speed, and mainly by their heavy keels, which are of metal, ranging from 600 to 1,500 pounds weight each, to which is added an equal weight of ballast. This burden keeps them steady in the water, and makes them very difficult to upset. Their buoyancy is maintained by a system of air-cases at either end and along the sides, which in turn diminishes the space required for the stowage of their passengers. Their ballast, which is of cork, increases their insubmersibility while augmenting their weight, and helps to float them even when stove. (In 1858 the Youghal life-boat, after staving in her bottom, was kept afloat by her cork ballast, and in this plight, with her deck six inches under water, held her brave course to a wreck and saved fourteen men.) Their speed, retarded by their weight and breadth of beam, is assisted by sails, which tend to counteract the stability maintained by their heavy keels. These keels, and their weight of ballast, cause them to right if upset, aided by the air-chambers, to make room for which they are built with great sheer, which also impedes their progress when rowed to windward by offering a considerable surface of resistance to the gale. The strength with which they are built enables them to withstand crashing seas, but involves great weight of materials, which, added to their ballast, makes them sit deep in the water, their draught being, in the smallest of them, 22 inches, thus adding to the labor of propelling them, and making their launching and landing more difficult. Their necessary stowage-room, diminished by their air-cases, is achieved by enlarging their size, which adds to their bulkiness, and makes it expedient to tow them by steam-tugs to the scene of their operations. In short, these heroic boats represent in their whole composition, as already expressed, a balance of reciprocal loss and gain in the adjustment of means to ends.

Apart from its strength of build and the stability which keeps it upright in all but the most terrific onsets of the sea, the incontestable and crowning merit of the English life-boat is that, when overturned, the law of its construction enables it to instantly right, and to bail itself in a few seconds. These admirable qualities are offset by disadvantages of bulk, weight, and draught, as has been already observed, which unfit it, except at certain points, notably on the Lakes, for the distinctive conditions of our service, and supply the general answer to the

question why it is not more in use upon our ocean coast. It is built in double diagonals of mahogany, though some have been constructed of fir, and never weighs less than 4,000 pounds, while the carriage upon which it is drawn to the place of launching weighs at least 2,000 pounds. In England, an old civilization, where the roads have been long made and are hard and always in good order, running, moreover, in the neighborhood of the coast, four or more stout horses are necessary to draw this boat to the water. There are no roads upon our beaches. The toilsome route is always over loose fine sand, which yields deeply to even the broadest wheel-tires. During storms the sea is driven high up on the beaches, compelling all passage to take place on their softest portion, above high-water mark, or over the hummocks and sand-hills beyond. Horses are seldom to be had, and enough in any instance to haul the English life-boat on its carriage over our roadless and yielding sands, it would not be possible to obtain. It will readily be seen that the crew of seven men at the station, or even two or three of these crews assembled at the sacrifice of valuable time from their respective distances apart, of from three to ten miles, would not be adequate to the task of drawing this ponderous ark of deliverance to its launching-place. This is one reason why the life-boat is not practicable for use upon our sea-coast. Another reason is in the peculiar nature of the coast itself. Unlike that of England, which is abrupt, our Atlantic shore is for the most part a gradual slope with flat beaches, and it would be extremely difficult, if not utterly impracticable, apart from the consideration of weight, to launch a boat of such deep draught in the shoaling water these beaches involve.

It is a serious question, moreover, the peculiar condition of our coast being considered, whether the surf-boat is not in other respects an equal, and in some a superior craft for our uses. Her lightness of build makes her sit upon the water like a sea-fowl, and speeding on her way to a rescue, in the dexterous hands of her crew, she will evade or dart across the dangerous ridges of the breakers, actually maneuvering with the combing seas, with a suppleness and celerity of which her ponderous rival is not capable. In all her service at wrecks thus far, she has very rarely been known to capsize, so supreme is the skill with which she is managed; and ordinarily this would occur only through the breaking of her steering oar, or a similar accident, causing her to broach to, a casualty which might equally upset the life-boat. Although not self-righting nor self-bailing, she is like the life-boat, insubmersible, all the later boats furnished to the stations having air-cases at the ends and air-cylinders at the sides under the thwarts. She requires for her handling only half the number of men usually required by the life-boat, an economical advantage, and also an advantage by limiting the number of persons exposed to danger or loss. Like the life-boat, she is provided with festoons of life-lines at her sides, to be grasped by persons in the

water seeking to get aboard of her. She works with facility under the lee of a stranded ship, taking advantage of the breakwater formed by the vessel to daringly approach her, unlike the life-boat, whose great size and weight, precluding any lightness of maneuvering, compel extreme caution in approaching a wreck, which has often to be done by working down to it in the tow of a steam-tug, or from an anchor planted to windward. The surf-boat is also provided with cork-fenders at her sides, which add to her buoyancy, while guarding her against damage by collision with wreckage. Being light, she can be fended off from bumping up against a stranded hull with boat-hooks in the hands of her crew, as the ponderous life-boat cannot easily be. A signal advantage is her cheapness, the cost of life-boats being very great, often involving beside the cost of providing other boats for use at the stations till the crews have learned to handle and trust these huge strangers. The surf-boat, moreover, has the deliberate preference for the uses of our Atlantic seaboard, of some of our most experienced keepers and crews. Captain Hildreth, for instance, of Station No. 39, coast of New Jersey, one of the very best of our surfmen, has repeatedly declared that the surf-boat provided for his station by the government cannot be surpassed, and that in her he will go upon any sea in which any life-boat can live. These considerations certainly strongly confirm the idea that the surf-boat is better adapted for our purposes on the flat beaches of the Atlantic coast, the necessities of the case aside, than the life-boat could be.

Self-righting and self-bailing are, however, regarded as qualities so desirable in a boat for life-saving purposes that due effort will always be made to incorporate them in the boats employed by the service. They belong to the Richardson life-boat, the merits of which were set forth in the last annual report. It is a modification of the English life-boat, of less weight and considerably lighter draught. It was purchased and placed at Station No. 4, District No. 1 (White-Head Island, Maine), and has given such satisfaction on several occasions of actual service, that four boats of the same description, with some variations, have been constructed, and will be stationed at Gurnet Point, Massachusetts; Fire Island, on the coast of Long Island; and Barnegat and Atlantic City, on the coast of New Jersey, localities which afford facilities for placing them directly in the water where they may be taken out to sea without being launched off the beach through the surf. These boats seem equal in all essential respects, for our purposes, to the English boats, and are considerably cheaper. Their use will help to determine whether it is feasible to employ such boats at other points upon the Atlantic coast. Notwithstanding the belief of surfmen that the surf-boat will safely ride upon any sea where a life-boat can live, and the fact that experience indicates that the former has not much greater liability to capsize than the latter in good hands, it is clear that in case of such an accident the superiority would be with the self-righting and self-bailing boat, since the statistics of disasters to life-boats in English

waters show that the percentage of loss of life is much greater in a certain class of these boats not built upon the self-righting principle; and the advantage in the capacity for carrying a considerably greater number of persons is important. The intention is, therefore, to bring it into use on the Atlantic coast where practicable. Familiarity with its management, and the realization of its distinctive merits would, in case of its introduction, no doubt dissipate the dislike with which many of our surfmen regard it.

Upon the lakes where the shores are steeper, or where commercial centers have caused the building of artificial harbors, the requisite facilities exist for launching the heaviest boats directly from their houses by ways or other mechanical contrivances; and accordingly the English self-righting and self-bailing boat has been furnished to all the life-boat stations, as distinguished from those designated as life-saving stations. The crews at first regarded it with disfavor, but the experience of last autumn has changed their views. The superintendent of the 10th district (Lake Michigan) writes that at several stations in his district the crews rendered assistance to distressed ships when the most powerful tugs and steam-craft refused to go out of the harbor, declaring that no vessel could live in the heavy seas, and mentions an instance in which a crew rendered aid to a vessel when thousands of people standing upon the docks declared that there was nothing made by man that could go out through the surf and sea then raging, and return with safety; and he adds: "The people here are beginning to regard the self-righting and self-bailing life-boat as one of the wonders of the world." Extracts of this letter were sent to the superintendents of the other lake districts for distribution among the life-boat stations under their charge, with the view of inspiring the crews with greater confidence in their boats. In acknowledging the receipt of these, the superintendent of the 9th district (Lakes Huron and Superior), in which there is but one station where the self-righting and self-bailing life-boat is used, says: "There is only one of the large life-boats in this district (at Thunder Bay Island), and the keeper and crew of that station have had so much practical experience with it that it would be impossible to instill in them any more confidence than they possess already. They regard the boat as something almost supernatural."

On the other hand, regarding the surf-boats in use at the remaining stations, he says: "The keepers and crews of the other stations are continually recounting the wonderful qualities of their particular boat in heavy surf. They all have been thoroughly tried. I must give you my experience in the surf-boat, upon my last trip to Lake Superior. I was at station No. 6. I had walked sixteen miles the day before, and must get to White Fish Point that day to catch the steamer, or be detained four days. I was not able to walk, and the wind was blowing a gale directly off the lake. The surf was very high and furious. I ordered the surf-boat out. The keeper could not believe me in earnest; but was soon

convinced that I was. The boat was taken to the beach, headed out, two men placed in the bows, the rest strung along her sides; and when a favorable opportunity came, the order to launch was given; but the effort was a failure; the boat was thrown ashore with a half pitch-pole. The second attempt ended like the first; but the third time the men were *mad* and determined, and she was successfully taken through the surf, and from there to the Point (eight miles). She did not ship two barrels of water. This crew will stake all they have on *that* boat. The men at all the stations are anxious for occasions to distinguish themselves."

The superintendent of the 8th district, referring to the performance of the life-boat on the occasion of a wreck in his district, writes: "I have seen considerable service in life-boats; have been instrumental, when commanding the Francis life-boat, in saving the remnants of three different crews, and knowing that neither keeper nor crew of the station ever had any experience with this class of life-boats, I felt the importance of the movement, volunteered to go, and assumed command. We ran along in three or four fathoms of water some seven miles with wind and sea on the starboard bow; the sea was unusually heavy and broke continually. The boat filled with water several times, and was on her beam-ends five times. She would right, empty herself, and be ready for the next comber. It was a severe test and proved the boat to be a perfect life-boat, and I am of the opinion there has never been and never will be a sea upon the lakes which the life-boat cannot safely encounter. There probably never has been a heavier sea on the lakes than that of Saturday last. I can personally vouch for the merits of the boat." Yet, for most cases of stranding, this same superintendent expresses the opinion that the surf-boat is preferable on account of its greater facility of handling, its lighter draught, and the greater ease with which it is rowed to windward. And, finally, all the superintendents upon the lakes, where the English boat has been supplied to all the life-boat stations, have demanded the surf-boat in addition, agreeing that in the majority of cases it will be more serviceable, and these boats have accordingly been furnished. The truth is that the life-boat is better for some occasions and the surf-boat for others.

NEW SIGNAL-CODE.

The danger to the crews of stranded vessels involved in attempts to land in their own boats has been illustrated in a previous part of this report, and every winter swells the list of victims who are allured into the ambush of the breakers by the comparatively formidable appearance of the surf as viewed from seaward, in spite of all the frantic efforts of the life-saving crews to warn them of their peril. The difficulty, also, or oftener the impossibility, of conference between the crew attempting a rescue and the wrecked people, greatly embarrasses the situation and hampers the efforts of both parties. The co-operation of the two is essen-

THE END

tial, and dangerous delays in securing it frequently occur. Last winter the crew of a Norwegian bark barely escaped destruction by learning at the last moment the part they had to perform. She struck in the morning near one of the stations, in a terrible gale. The use of the surf-boat was impossible in the furious sea. The surfmen fired a line over her with the mortar, but, to their astonishment, no attention was paid to it. All day long, by every expedient which suggested itself to them and the signal-service observer connected with the station, they sought to make the despairing crew of the bark understand what was required of them. At last, just as night was covering the scene, the observer succeeded in showing them that they must haul on the line thrown them in the morning, and the crew of the station, with the aid of the surfmen from the adjacent one, effected the rescue with the life-car after darkness, while the vessel was sinking—their labors ending a little after 9 o'clock p. m.

Hitherto the sole reliance for intercommunication between the shore and stranded vessels has been the speaking-trumpet and extemporized gesticulation, both of which, in more than half the instances, are ineffectual. To supply this deficiency, as far as possible, a code of signals has been prepared, consisting of such signals of the International Code as are applicable, with the addition of new ones where necessary.

This code is introduced in the new regulations, and is about to be supplied to all the stations, and the crews made familiar with its use. The Navy Department will publish it as an appendix to the International Code, and collectors of customs will be furnished with copies in cheap pamphlet form for distribution to masters of vessels entering at or clearing from their respective ports.

The code embraces distinguishing signals for the several districts and for each station, enabling passing vessels, by inquiring the number of a station by signal, to determine in a few moments, with the aid of the new Coast Survey charts, upon which the location of each station has been marked, their exact positions.

The code can also be used to aid vessels in communicating with the shore, or to warn them when standing into danger.

Various other improvements of greater or less value have been added to the appliances of the stations during the year, among which may be mentioned a large reflecting beach-lantern, designed for illuminating the scene of operations at wrecks, and a suitable medicine-chest, designed by Assistant Surgeon H. W. Sawtelle, of the Marine Hospital Service, stored with a quantity of restorative medicines and applications and instruments employed in the resuscitation of the apparently drowned. Both these additions are highly valued at the stations.

CONNECTION OF THE SIGNAL-SERVICE WITH STATIONS.

In former reports the utility of the connection of the storm-signal service with the life-saving stations has been referred to. During the past year the benefits of this attachment have been even greater than

hitherto, and in some instances the means it has furnished for transmitting orders directly from the Department to the scene of wrecks has probably involved vital consequences. Although the weather bureau is connected at but ten stations on the Atlantic coast, immediate notice of the occurrence of disasters in the vicinity of the stations was received at the Department nineteen times during the last winter. This service has also been of advantage in obtaining statistics of disasters, and the union has been of value in facilitating dispatch in the conduct of business between the Department and the stations.

REVISION OF THE REGULATIONS.

The extension of the service to the Lake and Pacific coasts, the establishment of the new classes of stations designated as life-boat stations and houses of refuge, authorized by the act of June 20, 1874, and generally organized during the past year, and the various improvements which have been introduced into the service since the issue of the original regulations of 1873, have made a revision and extension of the latter necessary. Great care has been taken to make them adequate to the necessities and requirements of the service, and yet very simple and plain, and they are supplemented with carefully-prepared instructions for the guidance of the crews of the stations in the different varieties of duties which they may be called upon to perform. A special feature of the instructions referred to it is deemed proper to briefly notice. Upon the publication of the old regulations the method for resuscitation of the apparently drowned in use by the Royal National Life-Boat Institution of Great Britain was adopted, that institution having given considerable attention to the various means which had been suggested, and settled upon a combination of the two systems of Dr. H. R. Sylvester and Dr. Marshall Hall, each of which remedied serious mutual defects, not necessary to discuss here, which experience had developed.

Numerous instances of successful resuscitation by the employment of this combination have been recorded in the annals of the Life-Boat Institution referred to. In a few instances in our own service the combination has also been successfully applied, but great difficulty has been experienced in making the keepers and crews of our stations sufficiently familiar with the prescribed course of procedure to enable them to practice it efficiently. A few years since Dr. Benjamin Howard, of New York, who had for several years taught both systems in his lectures to medical students, and had repeatedly failed to produce the desired effects in his attempted demonstrations, and had also experienced difficulties in making them readily understood and practiced by his pupils, determined to investigate the principles involved in the resuscitation of the apparently drowned with great thoroughness. His examination of the subject resulted in the production of a plan quite different from the other two, much easier to be taught and comprehended, and simpler of application; and during the last two years the

medical officer of the Marine-Hospital Service, who has been detailed for the physical examination of surfmen, has communicated this plan, which Dr. Howard denominates the "direct method," to the keepers and crews. This method they easily acquire and understand, and several opportunities for its application have occurred, each of which has been successfully treated when the attempt could be made within a reasonable time. It has consequently superseded the combined methods at first introduced, and has been incorporated into the regulations, with certain simple modifications and additions which research and experience have commended, and which have been arranged by Dr. J. M. Woodworth, Supervising Surgeon-General of the Marine-Hospital Service.

These modifications and additions refer to certain symptoms or appearances which have been supposed to accompany, and therefore to indicate death, and are based upon the results of the researches through an extended series of experiments by Dr. Labordette, supervising surgeon of the hospital of Lisieux, in France, which seemed to conclusively prove that the clenching of the jaws and semi-contraction of the fingers, heretofore regarded as evidences of death, and stated to be such in the directions for restoring the apparently drowned, published by the National Royal Life-Boat Institution, are rather evidences of remaining vitality, and should stimulate the operator to prolonged efforts to restore life rather than to discourage their continuance. Dr. Labordette found that these manifestations occur in the first stage of suffocation by drowning, and that a subsequent relaxation takes place at the last stage before *rigor mortis*, or the stiffness of the corpse, ensues. These views of Dr. Labordette have been approved by Dr. Brown-Séquard.

AWARDS OF MEDALS.

Two life-saving medals of the first class, and six life-saving medals of the second class, have been awarded during the year under the provisions of the act of June 20, 1874.

The medals of the first class were awarded to Col. J. Schuyler Crosby, of New York, at this date the American consul at Florence, and Carl Fosberg, a seaman belonging to the yacht *Mohawk*, in recognition of their extraordinary gallantry upon the occasion of the sudden sinking of that vessel in New York Harbor on the afternoon of the 20th of July, 1876. The horror which this dreadful catastrophe diffused for days through New York and its environs was only relieved by their action, which revealed some of the noblest traits of the human soul. The *Mohawk* was the largest and costliest of the fleet of pleasure-vessels belonging to the New York Yacht Club. She was the property of Mr. William T. Garner, a wealthy merchant of New York, residing near New Brighton, Staten Island, and was sumptuously furnished and appointed. On Thursday afternoon (July 20, 1876) she lay at her anchorage in New York Bay, off Stapleton, Staten Island. At about halfpast three o'clock Mr. Garner

arrived on board with a party of friends, consisting of Mr. Gardiner G. Howland, Mr. Louis B. Montant, Col. J. Schuyler Crosby, Mr. Frost Thorne, together with Mrs. Garner, Miss Adele Hunter, and Miss Edith May, arrangements having been made for a sail down the bay. The day had been somewhat dark and cloudy, with occasional squalls and showers, and at the time of the company coming on board, a thunder-storm was rising in the southwest, of which no other notice was taken by the guests than to retreat into the cabin from the already-dropping rain. The order had been given by Mr. Garner to get under way, and under the direction of the sailing-master, Rowland, the anchor had been lifted from the bottom, but was still in the water, and all the working sails were set except the flying-jib. The neighboring craft, of which there were a number, had all taken in sail, and the men upon their decks waited to see how the Mohawk would behave in the coming squall. At that moment although there was hardly a breath on deck, a wind smote the upper sails, and the sailing-master gave orders to let go the fore-sheet, the jib-sheets, and the fore-topsail. The order had only been obeyed in respect to the fore-topsail, when the squall struck the yacht with such fury that she careened, and lurched violently to port.

There was an instant tumult of cries, and the gentlemen rushed up on deck from the cabin. In a moment the vessel was on her side with the water pouring over the rail. While she was going over, Mr. Garner and Colonel Crosby hurried back into the cabin to save the ladies. Miss May was far over on the port side as they entered, and Colonel Crosby, calling to her to get out as quickly as possible, met her half way as she came across, got her to the companion-way, where he pushed her up to Mr. Howland and Mr. Montant, and sprang back into the cabin. The bravery of this action will be realized when it is stated that the water was then pouring down the companion-way in a steady stream. To enter the filling cabin down this narrow way, in a vessel keeled over on her side and rapidly sinking, seemed certain death. This Colonel Crosby did, and with equal courage, the seaman Fosberg rushed in with him. The scene in the cabin was frightful. The rich and heavy furniture had shifted, and Mrs. Garner and Miss Hunter were caught and pinioned by it against the sideboard. Mrs. Garner was screaming and her husband was making frantic efforts to release her and her companion, by throwing off the heavy articles which held them down. In these endeavors Colonel Crosby and Carl Fosberg desperately joined, pulling away the furniture and handing it up to Mr. Montant and Mr. Howland, who threw it out on deck. The water, meanwhile, continued to pour in and the cabin rapidly filled. Although nearly submerged, the three men never stopped their perilous work while it could be continued. Their labors were, however, ineffectual, and were ended by the sinking of the vessel. It was only four minutes from the moment she capsized till she went down. Mr. Garner was drowned, clinging to his wife, whom he would not leave. Colonel Crosby and Carl Fosberg,

toiling to the last second, were engulfed, and nearly lost their lives. Swallowed by the flood in the cabin, they only escaped by swimming upward, guided by the faint light shed through the water from the broken skylight. The aperture was fortunately large enough to enable them to pass through, and they reached the surface, and were picked up by one of the many boats which at once began to gather around the sunken vessel.

The yacht sank so rapidly that Miss May, after being saved by Colonel Crosby from the cabin, was again placed in the greatest danger. She had not instantly quitted the vessel, being advised to remain by Mr. Montant, who, with Mr. Howland, was engaged in throwing the cabin furniture out on deck from the companion-way. Consequently, when the vessel went down, they were all three caught between the companion-way and the furniture, which was now washed back into the cabin, and were completely covered by the rushing flood. Fortunately, Miss May had her arm outside the companion-way, which prevented her from being swept back into the cabin, and Mr. Montant, in his struggles, losing hold of her, she was enabled to swim, and with a few strokes gained the surface of the water, coming up near Mr. Howland, who supported her till they were picked up by a boat from a neighboring yacht. Mr. Montant also escaped, though unhappily he did not long survive the shock of the disaster.

The gold medals of the life-saving service have never been awarded more deservedly than in this instance. It was no common courage and humanity that impelled these two brave men to plunge within the sinking vessel, where in the half darkness, amidst the confusion of huddled furniture and rushing water, they strove for the lives of the unfortunate victims. The perfect behavior of the one in his manful efforts for his friends is matched by the action of the other in imperiling his life for strangers. Writing of him to the department, Colonel Crosby expresses a true feeling, the utterance of which adds new honor to his own conduct, in these words: "Too much cannot be said in favor of this man, who was governed simply by his own brave instincts rather than the hope of any reward. Nor did he have friendly or loyal considerations to prompt him to risk his own life, which he did by remaining to the last moment on board."

It deserves to be stated in this connection that Mr. Carl Fosberg completed his gallantry by his modesty. After the affair in which he behaved so well, he kept out of the way. When reporters sought him he hid. It was with difficulty, and after some time, that he could be found to give him the medal to which his conduct had entitled him.

The life-saving medals of the second class were bestowed upon six men who, at the risk of their own lives, saved a crew of nine persons from the wreck of the bark Tanner. This vessel, bound for Buffalo with a cargo of wheat, stranded about ten o'clock on the night of September 9, 1875, on the beach south of the harbor of Milwaukee. A severe

northeast gale was prevailing, and the vessel being submerged in about 20 feet of water, her captain and crew were forced to take to the rigging, where they remained all night, with the heavy sea breaking over them. At daylight the captain jumped into the sea, and in the effort to gain the shore was drowned. The unfortunate crew remained in the utmost peril, one of the masts of the sunken vessel having fallen and the vessel herself fast going to pieces. Their rescue was ineffectually attempted by the revenue-steamer Johnson, aided by the tug F. C. Maxon. It was finally accomplished toward noon of that day (September 10, 1875) by the following contrivance: A scow held by a long line from a steam-tug was allowed to drift down near the wreck, and a yawl-boat, similarly held to the scow, was let down still nearer. The men in the rigging then dropped one by one into the water and were picked up by those in the yawl, which was then drawn up with its burden to the scow, which in turn was drawn to shore. The six men referred to manned the yawl and scow, volunteering for this difficult and hazardous duty. Their names were Henry M. Lee, N. A. Petersen, Barnt Oleson, Anton Oleson, Henry Spark, and John McKenna. The skill and daring they displayed in the task of deliverance won hearty applause from many spectators, and fully entitled them to the recognition expressed by the medals awarded them.

The twenty-seven gold medals mentioned in the last report as having been awarded to the crew of the life-boat of the Royal National Institution, and the twelve survivors of the crew of the Mersey Docks and Harbor Board life-boat, in recognition of their efforts to rescue the persons on board of the American ship *Ellen Southard*, wrecked at the mouth of the river Mersey, near Liverpool, on September 26, 1875, efforts which cost three of the life-boatmen their lives, have since been struck, and delivered to the members of the respective crews. The presentation took place on the 16th of April, 1877, at the Town Hall, in Liverpool, the proceedings being attended by a large number of corporation officials, officers of mercantile associations, the principal American merchants in Liverpool, and most of the masters of American ships in port. The deputy mayor of Liverpool presided, and the affair assumed the gratifying character of an ovation to the brave recipients of the medals, and was also the occasion for cordial and enthusiastic references, on the part of the distinguished gentlemen at the meeting, to the action of our government in the matter, which met with a suitable response from General Fairchild, the American consul at Liverpool, who was also present. The same cordial spirit appeared in the comments which the occasion elicited from the English press.

DONATIONS OF BOOKS.

The acknowledgment, in the last annual report, of the generous donations of books to the stations by Capt. R. B. Forbes, Rev. William S. Southgate, and others, coupled with the representations of the solace

and benefit this well-chosen reading-matter affords to the sequestered groups of life-savers in their stations by the winter ocean, and also to persons who find shelter there from wrecks, and have to endure confinement during their recovery from exhaustion or injury, has had the effect of bringing to the service from other donors a greater or less number of books to every one of the crews.

To one station, that at Biddeford Pool, Me. (No. 5, district No. 1), the munificent gift of a fine library of seventy-eight volumes was made in the early spring by Joseph W. Smith, esq., of Andover, Mass. Subsequently the American Seaman's Magazine, the organ of the American Seaman's Friend Society, called attention to this field for the exercise of benevolence, and its agents have since had the satisfaction of being the medium of the magnificent donation to the service, by a gentleman who desires to remain unknown, of a library of about forty volumes to each unsupplied station. The number of stations entirely without reading-matter was eighty-two, consequently the whole number of volumes thus given by this generous man is upward of thirty-two hundred.

The selection of these books showed excellent judgment. A large part of them are well adapted to the distinctive tastes of the brave men who constitute our crews, being works of vivid adventure and travel, tales of shipwreck and stirring life under exceptional conditions. A certain proportion of these volumes is addressed to the more cultivated, though not more noble, tastes of another class of readers, whom shipwreck may lodge for awhile at the stations; and the collection contains some religious works, and books for the conduct of worship.

More recently a generous editorial in one of the leading New York journals, suggesting donations of this character, has evoked from a number of those persons in whom, as in the writer of the article, benevolence is active, a fresh flow of these benefactions. Those who can understand the dull monotony of the greater part of the life at the stations, relieved only by the occasional service at wrecks, will realize the warmth of welcome accorded by the surfmen to these volumes, and their cordial expressions of anticipated enjoyment and profit from their perusal. Beyond all their other and varied benefit, they come to these faithful men as tokens of remembrance and appreciation from an outer world.

These later donations, which are still arriving, and are always timely and most thankfully received, will fill the cases at many stations more meagerly supplied than that at Biddeford Pool, or the eighty-two stations furnished by the noble giver who hides his goodness behind the agency of the Seaman's Friend Society. Great care is taken for the protection of these books immediately upon their being received at the office of the Life-Saving Service in Washington. They are covered with cloth for their better preservation, properly labeled, provided in all instances with strong, handsome library cases, and sent away to their respective stations, according to their several needs.

It is peculiarly gratifying to recognize these copious evidences, springing from various localities, of kindly interest in the life-saving crews.

RECOMMENDATIONS.

The operations of the service for the year have been detailed in the foregoing pages, and its present condition exhibited with as much fullness as possible. The experience of the past twelvemonth has demonstrated the validity of the recommendations of the last annual report, and has developed some new necessities which have been the occasion for much anxiety, and which call for immediate legislative action.

Much embarrassment has been suffered in the efforts to organize volunteer crews at the life-boat stations on the lakes, and to bring them under the discipline and training necessary to render them efficient, on account of the peculiar operations of the law relating to their compensation. This is in the sixth section of the act of June 20, 1874, "to provide for the establishment of life-saving stations on the sea and lake coasts of the United States, and for the promotion of the efficiency of the life-saving service."

This act has certainly promoted the efficiency of the service, and under it several new and valuable features have been introduced, but it has imperfections, of which the provision just referred to furnishes the most important example, and under it difficulties are arising which it is feared will fatally affect the welfare of the establishment.

The language of the section is as follows :

That the Secretary of the Treasury may accept the services of volunteer crews of any of the life-boat stations herein authorized, who shall be subject to the rules and regulations governing the life-saving service ; and a list of the names of each crew shall be kept in the office of the Secretary of the Treasury. Such volunteers shall receive no compensation, except a sum of not more than ten dollars each for every occasion upon which they shall have been instrumental in saving human life, and such of the medals herein authorized as they may be entitled to under the provisions hereinafter made : *Provided*, That no payment shall be made to any person who shall not have actually participated in the efforts to save the life or lives rescued.

Under this provision it was hoped that an efficient crew of twelve men for each life-boat station could be enlisted subject to the rules, regulations, and discipline of the service, and to the proper orders of its officers, and that the compensation specified, namely, the sum of ten dollars for every occasion of saving human life, to each member participating in the rescue, together with the stimulus of local pride, the influence of the proverbial gallantry of sailors, and the enthusiastic applause with which communities repay brave actions, would afford sufficient inducement and encouragement for the maintenance of such crews.

At the outset there was no difficulty in finding good men to enroll themselves upon the life-boat rosters at any of the places where the stations were established, and perhaps the most sanguine hopes or expectations might have been realized if the opening of each station had been signalized by a great shipwreck, giving occasion for the deeds of heroic audacity in saving life of which these men are always capable, and bringing to them the full sweetness of public honor, and the solid, if smaller, satisfaction of pecuniary reward. Such a beginning might

have made considerable subsequent sacrifice and loss endurable. But, instead, their service began in prosaic duties, labors unhonored and unrequited, and the frequent and galling lessening of their own private means. The task they had undertaken involved, before the season of marine disaster and peril had set in, the devotion of much time to the irksome duty of drill and exercise in the use of the boats and apparatus, all of which was accompanied by the loss of wages at their regular daily labor, and it also involved, in several instances, the undergoing of severe toil in rendering assistance to vessels in distress, and saving property from wrecks, work which equally cost them their regular day's wages, and which, under the law, life not being actually saved, brought them not one dollar of recompense.

It must not be forgotten that all the members of these enrolled crews are poor laboring men who earn a scanty living by their toil, and too much stress cannot be laid upon the fact that, in the case of such men, the loss of wages signifies in some degree the deepening of their poverty toward penury, the aggravation of the petty miseries of their straitened means, the diminution of their small home comforts, the deprivation of some of the common necessities of life, the loss or want of some plain article of food or apparel for themselves, their wives, or their little children. Add, besides, that the services which they had rendered at such cost were of grave worth and value, but had brought them no applause or distinction. Having worked, they must have felt that they had earned, and they had not been paid. Having served, they heard no echo of appreciation. To such an experience succeeds the double sense of injury and injustice.

The results that ensued are those of effect following cause. They became restive and discontented, then uninterested and neglectful. They failed to attend upon the occasions for drill and exercise absolutely required to prepare them for succoring the shipwrecked with the best promise of success, and when at some of the stations serious marine disasters came, there were gaps in the life-boat crews which had to be filled with chance volunteers. It is true that at none of these disasters were the efforts of the stations marked by actual failure, but it is also true that, in some instances at least, well-trained and disciplined crews would have rendered better service.

There would never be any difficulty in obtaining volunteers upon an occasion of shipwreck in any respectable community; but a real life-boat crew, capable of splendid service in the terrible hours of marine ordeal, cannot be improvised, and no terms can overstate the importance of having at command for such seasons crews carefully trained to their heroic work and skilled by long drill in the use of the life-saving apparatus. The cannon demands the cannoneer, and the life-boat requires the life-boatman. The Life-Saving Service is, in fact, virtually a profession, requiring regular and sedulous instruction and practice, and the existing law should be so amended as to render it fully efficacious by providing for this requirement.

The laws under which life-saving stations, as distinguished from life-boat stations, have been established contemplate the saving of property, though of course in subordination to the saving of life, and it is well known that great amounts have been saved by the crews of these stations, who are expected by our seaboard interests to use all their permissible force and means for this purpose. In the case of the life-boat stations, there is nothing in the law requiring the crews to aid in saving property, and the provision confining their compensation to the instances in which they save life may be taken as an indication that the intention of the law is to limit its requirements to this particular. Nevertheless, there is, perhaps, no good reason why life-boat crews should not also attempt to save imperiled ships and cargoes, and this is certainly expected of them by the commercial community. Despite the absence of legal requirement, a failure on their part to render assistance of this kind when it lay within their power would bring down upon the service and upon the keepers and crews a torrent of denunciation from press and public. The men of the life-boat stations must, therefore, choose between assisting to save marine property at the cost of loss of wages, severe physical labor, exposure to the ravage of rough weather, and actual risk of life—all without the slightest recompense, and for the material benefit of people far better able to sustain loss than they—or refusing to render such assistance at the expense of suffering to our shipping interests, their own abuse, the serious injury of the Life-Saving Service, and reflected disgrace upon the nation.

The defective condition of the law has yet another aspect. A vessel may be apparently in the utmost danger, the life-boat crews may force out their way from shore through terrific seas, they may fight their course inch by inch against furious gales and all the bitter violence of the elements, and after strenuous efforts, after appalling perils, by the sternest and most gallant endeavors, they may succeed in landing the passengers and crew; then, if the vessel happens to outride the storm, it is proof that if the people had remained on board they would not have perished; and consequently, under the law, life not having been saved, the men of the life-boat get no recompense for their dreadful risk and toil.

There are also occasions, not unfrequent, in which it is not possible to determine whether the life-boat crew actually saved life or not, and in such cases, the burden of proof being upon them, they again suffer whatever injustice pertains to gallant and laborious effort unrewarded. Other objections exist to the section of the law under notice, but these are sufficient to show the necessity of amendment.

It is therefore recommended that the section referred to be so amended as to extend the compensation of enrolled members of volunteer crews of life-boat stations to all occasions of actual and deserving service at any shipwreck or in the relief of any vessel in distress, and that such persons as may volunteer to take the places of absent or disabled members of a crew, and who shall be accepted by the keeper, may be

paid therefor, in the discretion of the Secretary, a sum not to exceed eight dollars each for every such occasion; and, furthermore, that the members of the crews may be paid a sum not exceeding three dollars each for every day's attendance at drill and exercise.

An amendment of the next section of the act referred to, authorizing the award of life-saving medals of two classes, it is believed might also be advantageously made.

Under the existing provision a person is entitled to neither of the medals unless he shall have endangered his own life in saving or endeavoring to save the lives of others from the perils of the sea. It will readily occur that there may be highly meritorious exertions, painful, patient, and laborious efforts, involving extreme hardships, sacrifice of property, even loss of health and injury to person, in humane efforts at relieving distresses occasioned by the perils of the sea, and yet without risk of life to the benefactor. It would, therefore, seem proper, and in consonance with the object of the legislation, that such deeds should be recognized by extending the bestowal of the medal of the second-class upon persons making such signal exertions in rescuing and succoring the shipwrecked or drowning as, in the opinion of the Secretary, shall be sufficiently deserving. Such cases are generally recognized in foreign countries by the bestowal of medals and decorations, either by government or by humane and benevolent societies.

In this connection it is mentioned that there are on file several applications for reimbursement of moneys and substance expended in saving persons from marine peril and in succoring them. It would seem to be only just that such persons should be recompensed. The required expenditure would be but small, and the absence of a provision for restoring to humane persons, generally of slender means, the values, either in money or materials, expended by them in such deliverance or succor, burdens compassion with hardship, and tends to discourage the disposition to relieve this class of human distresses.

In the last annual report an appeal for the increase of the compensation of keepers of stations was made in the following terms:

The compensation given to keepers of life-saving stations was fixed in 1854 at \$200 per annum. The purchasing power of money having considerably lessened since that time, this pay, never sufficient, has now become glaringly inadequate. Its inadequacy is still further heightened by the fact that the duties and responsibilities of these officers have become greatly multiplied. The main object of the Life-Saving Service is to rescue life and property jeopardized by marine accident on the coast; and it is eminently and peculiarly, both as regards the keepers and their crews, a service of picked men. The higher qualifications are, however, demanded of the keepers, and theirs, too, is the weightier burden of responsibility. They are charged with the care and order of the stations and the boats, apparatus, &c., therein housed. They are required to keep accounts of all receipts and expenditures, journalize all transactions, and maintain all necessary correspondence with their superior officers. They are also charged with the safe-keeping of all cargoes landed from wrecked vessels. The certain degree of education and the high integrity and accountability involved in these requirements are but a part of the demand made upon them. They are, in addition, required to be expert

and valiant seamen, and are selected on account of their known intrepidity in danger and their skill in managing boats under the most trying circumstances. As captains of their respective crews, they must also be good commanders, and possess the force and quality of character which win the confidence and obedience of their subordinates and maintain the discipline and efficiency of the service. Their whole duty involves the frequent peril of their own lives, the safety of the men under them, and the salvation of those imperiled on wrecks.

Under these considerations their compensation should plainly be proportioned, in some degree, to the standard of their qualifications, the nature and extent of their responsibilities, the gravity of the hazards they incur, and the value of the services they render. The pay of light-keepers, whose virtues are mainly comprised in the somewhat passive duty of vigilance—the unsleeping watch of a lamp—averages \$600 per annum, and the active charge of the keepers of life-saving stations, with its involved hardships and dangers, varied requirements, and moral and pecuniary value to commerce and the nation, certainly deserves an equal rate of compensation. The pay, too, should be such as to enable the government to secure the services of these men, not, as now, for a season of from four to six months, and merely upon call at other times, but continuously for the whole year, during which time they should reside at the stations as custodians of the public property, which is at present liable to depredation in their absence. But to retain proper men in these positions for any term of service, without advancing the rate of compensation allowed, is rapidly becoming impossible. Competent persons cannot be found to accept posts of responsibility, of hardships, of frequent deadly peril, such as these, for \$200 per annum. At present these places are filled with much difficulty, and although the selection of keepers is made from the best class that offers, the choice is painfully trammelled, and constant anxiety is felt lest some occasion of shipwreck may develop the fact that these grave duties have already passed into the hands of incompetency, involving wrong and loss to life and property, injury to the service, and shame to the country which could never be repaired.

The foregoing considerations gather weight and force daily. An added reason of equal cogency with any above urged for increasing the compensation of these keepers is involved in the fact that they annually confer upon the government in repairs and improvements in and around the stations an amount more than equal to their compensation. A first-class keeper always takes the sort of pride in his station that a superior seaman does in his ship, and this leads him to continually plan and contrive numerous ways for enhancing its appearance or increasing its efficiency, and to utilize the spare time of his crew in these directions. A visitor to many of the stations would be at once struck by their trim and ship-shape interiors; the neat and orderly arrangement of their furniture, utensils, and implements; the quaint decoration in colors of the doors and lockers, the ornamentation of the walls by festooned flags, framed prints, fancy-lettered mottoes or inscriptions; the carved racks for fowling-pieces; the colored and labeled boxes set on brackets here and there for the men's tobacco, the matches, or the station's odds and ends; and other admirable evidences of surfman taste and tidiness which show what are the winter indoor employments in leisure hours of the men under the stimulation and direction of a good keeper. These, however, are but minor matters, the embroidery upon a vast amount of serious work affecting the usefulness and stability of the stations, which the government might well bear the cost of performing, but which is

voluntarily undertaken by these officers. For the last five years not a winter has passed in which, through the care and foresight of these men, some station has not been saved from destruction by tempest or the encroachment of the sea. The banking up with brushwood and turf of the foundations, perpetually undermined by the action of gales upon the sand, is one of their unceasing tasks. The minor repairs of the wood-work, constantly wrenched and battered by the strong coast wind, and its preservation by painting, are a part of their contribution to the integrity of the buildings. Upon a recent tour through district No. 9 (Lakes Huron and Superior), the inspector found repeated evidences of their zealous activity. At Nos. 2, 3, and 5 they had built piers in front of their stations for launching and landing the boats. At No. 4 the keeper and his men had done considerable work on the piers and channel provided by the government. At No. 5 several acres of timber-land had been cleared so as to enable a good view to be had from the station along the coast for several miles to the eastward. At this station the keeper had also constructed a substantial pier of crib-work, running 120 feet into the lake, for convenience in getting the boat afloat in all weather. He had also cut a range through the forest, for mortar-practice, three hundred yards long and fifty yards wide and built a neat and substantial log house for the boat-carriage and hand-cart, thus giving ampler room to the station. At all of these stations neat oar-racks and gratings for the ropes and lines had been made, and the inspector everywhere found the men engaged in clearing the beaches of drift-wood and cutting roads along the coast or connecting them with the county or State roads. All this work, of the most signal use and value, had been done without any other cost to the government than the wages of the keepers and crews. Such is the manly spirit of these men. The fidelity and energy they bring to the service of the shipwrecked, are also expressed in these voluntary mechanic labors, rendered with a large generosity, which brings into impressive contrast the miserly attitude of the law according them its meager dole. To men like these, praise belongs in no stinted measure. The record of the service for the past six years, unsurpassed by the life-saving service of any country, and which forms a part of the honor of the nation, is mainly due to their skill, their daring, their alertness, and their integrity. Indeed the efficiency of the life-saving organization proximately depends upon the character of these officers. The keeper is the animating soul of the station. It is to him the crew look for inspiration and guidance. The discipline which makes these six men as one in fidelity to duty, emanates from him. The vigilance of the lonely night-patrol upon the winter beach, which lets no vessel strand unobserved, and is to the service like an unsleeping eye, depends upon his own vigilance. In the hour of peril to the grounded vessel, it is his spirit that determines whether the men he commands shall prove heroes or cowards, whether the rescue shall succeed or fail,

whether life shall be saved or lost, and honor or shame befall the service and the nation.

Nothing better indicates the quality of these men than the fact that thus far, and for so long, humane considerations and their intuitive attraction to this heroic service, have weighed against their plain interests and kept them in their thankless positions. The time for this, however, is passing, or already past, and the anxiety for the welfare of the service, expressed in last year's report, has sorrowfully deepened. Hereafter, it would seem, the arduous and dangerous tasks of the life-saving establishment must pass into lower hands. The reports of inspection name several instances where keepers—always the best—desire to be relieved of their charge, and state that urgent appeals to their humanity and the hopes of adequate recompense have alone prevailed upon them to continue in the service. The resignations of several others of equal worth have been received; and others are pending, awaiting the legislative action of this winter.

It must be remembered that the more efficient keepers are men of good business qualifications, many of whom have followed the somewhat lucrative occupation of saving property from wrecked vessels, either upon contract or at the legal rates of salvage. While keepers of the stations, they are prohibited, under the construction of the law, from claiming for their services compensation from ship-owners or underwriters. Their continuance in the service is therefore a pecuniary detriment. In many cases they receive from the government no more, and in some instances less, than the surfmen they command. On the coast of Maine, for example, where the term of service is six months, the crews, paid individually \$40 a month, receive \$240; while for the same term the keeper gets only \$200. Lower on the coast, where the term of service is five months, the pay of the keeper is matched by that of any of his subordinates. The incongruity of injustice could have no better illustration than the man of trusts and responsibilities—the higher in education, the stronger by nature and experience, custodian of public effects, keeper in the house, captain in the boat, the right arm and the chief voice in the hour of danger and deliverance—proclaimed by his rate of pay as no more than the men under him.

The sum of \$200 per annum has been repeatedly officially declared, and is widely publicly felt, as an utterly insufficient compensation for these keepers. The renewed recommendation for its increase is made under a painful sense of exigency, derived from the knowledge that it is no longer possible to keep or obtain competent men upon the old terms in such positions, and the gloomy anticipation that with the inferior officers who must succeed them injury and calamity to maritime interests are pending, involving the dwindling of the service and the shame of the country.

There has been no disposition to unduly extend the Life-Saving Service, but rather in the interest of sound economy to limit as far as consistent

the field of its operations, but it would be remissness, at least, not to recommend the establishment of certain stations for which there is a real necessity.

The location of the larger number of the existing stations was based upon the recommendation of a commission appointed in 1873, under the provisions of an act directing the Secretary to report to Congress the points on the sea and lake coasts of the United States at which commerce and humanity required the establishment of life-saving stations. At that time the means for gaining the valuable information which the statistics of wrecks, authorized by the act of June 20, 1874, now supply were not available, and the commission had to rely, so far as the statistics of disasters guided them, upon such information as they could glean from the recollection of ship-owners, ship-masters, officers of the customs, and others whose pursuits were of a character to interest them in such matters. The success of their work is indicated by the occurrence of disasters requiring the aid of the service at nearly every point selected by them at which stations have been established.

The researches of the commission on the Southern coast were not so successful as elsewhere, the data obtained being extremely meager on account of the suspension of trade during the war and its limited resumption up to the time of their examination. The experience of the last few years has plainly shown the need of additional stations upon the coasts of Virginia and North Carolina. It was hoped, as is stated in the report of last year, that the expense of establishing these stations might be avoided, and an examination of the subject with that view was made during the last winter and spring, but the scheme was found impracticable and inadequate.

On the coasts named there are now but ten stations, the distance between which averages ten miles, which is far too great to admit of the thorough application of the prime feature of the service, the patrol system. On other portions of the Atlantic coast which admit of the patrol the stations are from three to four miles apart, a distance full great enough to admit of the enforcement of the regulation in the fierce storms of winter with safety to the patrolmen. The distance is also so great as to materially impair the chances of reaching, in time to effect rescues, the shipwrecks which may occur midway between the stations. It is therefore recommended that authority be given for establishing additional stations on this coast at intermediate points between those existing. Five others should also be located between the southernmost station and Cape Fear.

Strong petitions for the establishment of a life-boat station at Galveston, and upon other portions of the coast of Texas, have been received. The commerce of Galveston has had a large and rapid growth within the past few years, and the increase of the shipping of the port has been accompanied with such corresponding frequency of disasters as to justify the appeal. These disasters extend to shipping at other points on the

coast, more especially those most exposed to the force of the "northerners" which sweep over the gulf. Four life-boat stations are therefore recommended to be established, one at Galveston, one at Pass Cavallo, one at Mustang Island, and one at Brazos Santiago.

On the great lakes additional stations should be established, as follows:

On Lake Michigan, complete life-saving stations at Sleeping Bear Point and at Bayley's Harbor, and life-boat stations at Kenosha and Muskegon; and on Lake Huron, complete life-saving stations at Old Point aux Barques, near Port Austin, and at Middle Island, and a life-boat station at Sand Beach.

There should also be established complete life-saving stations at Cranberry Isles, Maine, and Watch Hill, Rhode Island.

As to the propriety of the establishment of all these stations, it may be remarked that the members of the commission referred to concur.

Less hesitancy is felt in urging this recommendation in view of the fact that but a small appropriation will be required, an economical management of the appropriation for the establishment of the stations authorized by the act of June 20, 1874, having left an unexpended balance of more than a hundred thousand dollars, which would suffice to construct and equip a large proportion of the stations suggested.

The older stations will soon begin to require outlay for repairs and the renewal of equipments, and as it frequently happens that old buildings and material, unfit for further use in the service, could be advantageously disposed of, and in order that there may be a small fund always available for keeping the establishment in order, it is recommended that authority be given for the sale of condemned property belonging to the Life-Saving Service and the devotion of the proceeds to the above purpose. Similar authority exists in regard to some of the other branches of the service, and is exercised to the public advantage.

With a view to the better protection of the coast against the ravages of the equinoctial gales and the later storms of autumn, and also those which sometimes occur in the late spring, it is recommended that provision be made which will enable the stations to be opened for service on the Atlantic seaboard, annually, from the 1st of September to the 1st of May, if not for the entire year.*

* This recommendation receives peculiar emphasis and cogency from the recent loss of the United States steamer *Huron* on the coast of North Carolina. By this dreadful disaster the nation has lost one of its vessels of war and nearly all of her gallant officers and crew. Incident to this calamity, the Life-Saving Service has also to deplore the fate of one of its bravest and most zealous and efficient officers, Capt. J. J. Guthrie, the superintendent of the sixth life-saving district, who perished in the endeavor to render assistance to the unfortunate victims of this terrible shipwreck. The *Huron* stranded in a heavy gale, at 1.30 a. m. on the morning of November 24, 1877, at a point between 200 and 300 yards from the shore, three miles south from station No. 7 (Nag's Head, North Carolina), and in a few hours went to pieces. As serious shipwrecks are comparatively unfrequent upon that part of the coast so early in the season, legisla-

The time for opening the stations for service in the respective latitudes of our coast, and the conditions of their operation, have been determined only by experience. Up to 1870 no crews were employed at the few existing life-saving stations, which were then confined to Long Island and New Jersey. At the previous session of Congress an amendment to the appropriation bill was introduced to authorize the employment of crews of experienced surfmen at the several stations from December 1 to March 1, which, after a warm advocacy on the part of several gentlemen, was, nevertheless, defeated. A compromise, however, was secured which provided for the employment of crews at alternate stations for the period named.*

In that winter several fatally disastrous shipwrecks occurred, which woke the nation from its lethargy on this subject, and the press teemed with indignant criticism upon the condition of the Life-Saving Service. The ultimate result was that Congress appropriated on the 20th of April, 1871, \$200,000 for increasing the number of the stations and improving their appliances, and authorized the Secretary of the Treasury to employ crews of experienced surfmen at such stations, and for such periods as he might deem necessary and proper. The action following this measure led to the organization of the service upon its present basis and to its subsequent development. Crews were employed at the several stations with unexpectedly beneficial results, and the achievements of the service which followed its provisional organization caused new stations to rapidly spring up along the whole extent of the coast under the authority of law, and the periods of their service were fixed as was found expedient. These periods were extended at the several stations as experience required and the appropriations permitted. Under the same rule

tive provision has not hitherto been made for opening the life-saving stations in that locality before the 1st of December of each year. A necessity so exceptional could not, of course, be foreseen, but if the limits of the appropriation had permitted the neighboring stations to be in operation at the time, the stranding of the *Huron* would have been discovered soon after its occurrence, and it is probable that most or all of the lost would have been saved.

* The original amendment was introduced by the Hon. Charles Haight, of New Jersey, in response to a resolution of the legislature of that State, and was urged by him with a power and persistency which deserved success. The substitute which was adopted, however, was that of the Hon. S. S. Cox, and its passage was secured chiefly through his endeavors. This provision was of signal consequence to the Life-Saving Service. To secure regular crews even at alternate stations opened the way for the subsequent employment of crews at all the rest. The step, therefore, was of cardinal value, as it produced the conditions which made it possible to patrol the beaches and effect difficult rescues, the double task of the Life-Saving Service, and impossible without regular crews. The action was the most important since the original movement which brought the service into being. The next measure of paramount worth was the act of March 3, 1873, authorizing the establishment of additional stations on the coast of New England, Virginia, and North Carolina, and directing the Secretary of the Treasury to ascertain and report the localities on the sea and lake coast of the United States, where life-saving stations were desirable. This magnanimous legislation, which first extended the benefits of the service to the entire coast of the United States, and gave it national importance, was due to the efforts of the Hon. John Lynch, of Maine.

of practice, a further extension of the time of service is found necessary, and recommendation for the provision of the means requisite to effect this measure is made accordingly.

The recommendation is renewed to give the Secretary authority to confer the powers of inspectors of customs upon the keepers of stations. This measure involves no expense whatever, and would be of great advantage to the government. Half the year these keepers maintain a close patrol of a great extent of the coast, over which they have a great degree of surveillance the remaining half. If they were clothed with the proper power, these conditions would enable them to better protect wrecked property and to prevent or detect smuggling, thus inuring to the material advantage of the revenue.

ACKNOWLEDGMENTS.

The purchase and selection of the line-carrying rockets and other apparatus from the Governments of Germany and Russia, referred to in a former part of this report, have required much attention and effort on the part of the American ministers at Berlin and St. Petersburg, which have been heartily bestowed, and the details of the business have involved considerable correspondence, which has been conducted through the courteous offices of the Department of State.

The Boxer rockets and other articles procured from the British Government were obtained through the kind agency of the Hon. Charles F. Conant, late Assistant Secretary of the Treasury.

Valuable aid in the administration of the service has been received from various officers of the Revenue Marine. Chief among these must be mentioned Capt. J. H. Merryman, the inspector of the service, who during the past year, as in years formerly, has performed the laborious and difficult duties devolved upon him with tireless energy and rare judgment. His thorough scrutiny of the condition of the stations, and his strict but impartial investigations of alleged delinquencies on the part of officers and employés, have greatly assisted in maintaining the service at its present degree of efficiency, and his numerous suggestions in relation to the establishment have, as usual, led to material improvement in many particulars.

Capt. John McGowan, who has been joined with Captain Merryman in the supervision of the construction of new buildings, has performed his duties with the same intelligence and fidelity which have characterized his former labors in this field.

Acknowledgments are due to Lieuts. Walter Walton, William J. Herring, Charles F. Shoemaker, Thomas D. Walker, and William C. DeHart, of the Revenue Marine, who as assistant inspectors, have greatly aided by their vigilance in preserving the *morale* of the service.

Through the courtesy of Dr. Woodworth, of the Marine-Hospital Service, the valuable aid of Surgeon P. H. Bailhache and Assistant Sur-

geon H. W. Sawtelle has been secured in conducting the physical examinations of keepers and crews, and instructing them in the method of resuscitating the apparently drowned, for which cordial acknowledgments are rendered.

The buildings which have recently been completed for life-saving and life-boat stations at various points upon the Pacific coast, Lake Erie, Lake Superior, and Lake Michigan have been designed by Mr. J. L. Parkinson, architect. The complete life-saving station exhibited at the Centennial Exposition, and since erected at Cape May, N. J., was also designed by him. These plans have been especially marked by architectural taste and adaptability to the requirements of the service, and call for suitable recognition and acknowledgment.

Thanks are also rendered to the directors of the French Central Society for Saving the Shipwrecked (*Société Centrale de Sauvetage des Naufrages*), at Paris, for their courtesy in regularly supplying our service with their valuable periodical, published quarterly, under the title of "*Annales du Sauvetage Maritime*."

The usual table of wrecks which have occurred within the province of the life-saving stations during the fiscal year, showing specifically in each case the dates, localities, names of vessels, their value, and that of their cargoes, the property saved and lost, the number of lives saved and lost, and all other particulars of interest, will be found in the appendix.

There will also be found abstracts of the official reports of officers of the customs, of wrecks and casualties which have occurred to American shipping in our own and foreign waters and to foreign shipping in our own waters, in accordance with the requirements of the act of June 20, 1874, collated into a series of discriminating tables, for convenience of reference, together with explanatory notes and observations thereon.

I have the honor to be, very respectfully, your obedient servant,
SUMNER I. KIMBALL,
General Superintendent.

HON. JOHN SHERMAN,
Secretary of the Treasury.

APPENDIX.

LIFE-SAVING SERVICE.—TABLE

DISTRICT NO. 1, COASTS OF.

Date.	Place.	No. of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1876.						
July 6	Long Ledge, Seal Harbor	4	Sc. W. H. Sargent	Sedgwick, Me	Parker	144
July 6	.....do	4	Sc. Mary Monroe	Rockland, Me	Clarkson	204
July 20	Near Whitehead	4	Sc. F. A. Colcord	Searsport, Me	Passe	88
Aug. 25	Long Point, Spruce Head	4	Sc. Ocean Queen	Gloucester, Mass	Parker	52
Sept. 30	Lark's Ledge	4	Sc. Timena	Machias, Me	Thompson	96
Dec. 2	Go'lfrey Ledge	1	Sc. Dreadnot	St. Andrews, N. B	Small	18
Dec. 16	East side Quoddy Bay	1	Sc. Com. Kearney	Calais, Me	Mason	98
Dec. 16	Hay Island Ledge	4	Sail-boat	Whitehead Island	Metcalf .....	.....
Dec. 30	Long Ledge, Seal Harbor	4	Sc. Village Belle	St. John's, N. B	Riley	70
Dec. 30	Quoddy Bay, near station	1	Sc. A. H. Sawyer	Calais, Me	Cook	91
Dec. 31	One mile from station	3	Sc. W. H. Miller .....	.....do	Buckman	139
1877.						
Jan. 9	Southern Island Bar	4	Sc. Lettie Wells	Calais, Me	Ashford	192
Jan. 26	Round Shoal, Quoddy Bay	1	Sc. Col. Cook	Gloucester, Mass	Bearse	64
Jan. 27	Quoddy Bay, near station	1	Sail-boat	Lubec, Me	Wall's	8
Mar. 4	One and one-half miles west of station.	3	Sc. Laura Sayward	Gloucester, Mass	Davies	63
Mar. 7	Negro Island Bar	5	Sc. L. B. Ives	New York, N. Y.	Isilan	175
Mar. 12	Cross Island Narrows	2	Sc. Myra	Machias, Me	Bryant	44
Mar. 22	Tenant's Harbor	4	Sc. David J. Adams	Gloucester, Mass	Merrey	70
Apr. 1 ^a	Burnt Island Ledge	4	Sc. S. E. Woodbury	Searsport, Me	Putnum	117
Apr. 27	Hurricane Ledge	4	Sc. Brunette .....	.....do	Rich	85
June 11	Sun. I. bar, Monseabre Beach	3	St. Lewiston *	Portland, Me	Deering	1,127
June 23	Two miles west of Monhegan Island.	4	Sc. J. Cooledge	Franklin, Me	Dyer	52
	Total					

DISTRICT NO. 2, COAST

1876.						
July 27	Nausett Harbor Bar	10	Sc. Washington Freeman.	Thomaston, Me....	Robinson	96
July 30	Near station	12	Sc. Elizabeth English	Dennis, Me	Kelly	187
Sept. 23	Three-fourths mile east by north of station.	6	Sc. Capitol	Albany, N. Y	Paries	87
Nov. 18	Gurnet Rock	3	Sc. S. E. Trafton	Bath, Me	Oliver	62
Dec. 3	Two miles northeast of Highland Light.	7	Sc. Cherub	Gardiner, Me	Fletcher	112
Dec. 16	Two and three-fourths miles north of station.	11	Sc. Thomas Hull	Stonington, Conn	Sylvester	99
Dec. 16	.....do	11	Sc. Marshall Perrin	Sandwich, Mass	Packard	149
Dec. 18	Nausett Beach	10	Sc. Ellie L. Smith	Camden, N. J	Muncey	331
Dec. 24	Near station	6	Sc. Mary T. Bryan	Philadelphia, Pa	Hugg	399
1877.						
Jan. 2	One and one-half miles east of station.	6	Sc. Walter Irving	Thomaston, Me	Rider	89
Jan. 2	Three-fourths mile from station.	6	Sc. Massachusetts	Rockland, Me	Kenniston	52
Jan. 15	Three-fourths mile west of station.	6	Sc. Starry Flag	Gloucester, Mass .....	.....	59

* Assisted in piloting steamer into port in a dense fog.
 For particulars of this disaster see page 20 of report.

OF WRECKS, SEASON OF 1876-'77.

MAINE AND NEW HAMPSHIRE.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons sheltered at stations.	No. of days shelter afforded.
Bangor, Me..	Providence, R. I.	Lumber and slate.	\$5,000	\$8,200	\$13,200	\$13,150	\$50	5	5	...	...	...
Rockport, Me.	New York, N. Y.	Ice.....	10,000	700	10,700	10,630	100	6	6	...	...	...
Searsport, Me.	Boston, Mass....	Hay and bricks.	7,000	1,160	8,160	500	7,660	4	4	...	4	8
Bangor, Me..	Gloucester, Mass.	Lumber	3,000	2,000	5,000	4,810	160	4	4	...	...	...
St. John's, N. B.	New York, N. Y.	do.....	6,000	5,000	11,000	10,200	800	5	5	...	...	...
Grand Manan, Me.	Eastport, Me....	Fish....	800	700	1,500	1,400	100	3	3	...	...	...
Boston, Mass.	Calais, Me.....	Pork and beef.	7,000	1,200	8,200	6,200	2,000	5	5	...	...	...
Spruce Head Island.	Whitehead Isl'd	.....	30	.....	30	25	5	1	1	...	...	...
St. John's, N. B.	Boston, Mass....	Lumber	1,600	1,420	3,020	2,550	510	4	4	...	4	8
Boston, Mass.	Calais, Me.....	Groceries	4,000	10,000	14,000	14,000	.....	6	6	...	...	...
St. John's, N. B.	Demerara, S. A.	Lumber	6,000	2,300	8,300	7,650	650	6	6	...	...	...
Boston, Mass.	Calais, Me.....	Flour, &c.	16,000	5,000	21,000	20,270	730	7	7	...	...	...
Eastport, Me.	Boston, Mass....	Fish....	4,500	4,000	8,500	8,500	.....	6	6	...	...	...
do.....	Mistake Island..	Groceries	200	100	300	150	150	1	1	...	...	...
Gloucester, Mass.	Eastport, Me....	Fishing-outfits.	6,000	2,000	8,000	8,000	.....	12	12	...	...	...
Rockport, Me.	New Berne, N. C.	Ice.....	4,000	7,000	11,000	11,000	.....	6	6	...	...	...
Portland, Me.	Machias, Me....	General	700	800	1,500	1,500	.....	3	3	...	...	...
George's B'ks	Port of safety ..	Fishing-outfits.	5,000	500	5,500	5,500	300	14	14	...	...	...
Searsport, Me.	Buckville, N. C.	Lum., &c.	2,500	500	3,000	2,900	100	5	5	...	...	...
Boston, Mass.	Searsport, Me....	Flour, &c.	6,000	19,000	25,000	15,800	200	4	4	...	...	...
Portland, Me.	Machias, Me....	General	93,000	2,000	95,000	92,000	3,000	70	70	...	...	...
Franklin, Me.	Boston, Mass....	Wood....	500	250	750	200	550	3	3	...	...	...
.....	.....	.....	125,830	64,772	250,602	247,340	13,260	180	170	...	8	16

OF MASSACHUSETTS.

Rondout, N. Y.	Boston, Mass....	Cement ..	4,000	1,500	5,500	4,900	600	4	4	...	...	...
Baltimore, Md.	do.....	Coal.....	9,000	1,600	10,600	.....	10,600	6	6	6	6	6
New York, N. Y.	do.....	Stone....	6,500	1,500	8,000	900	7,100	3	3	3	15	15
Bath, Me....	Duxbury, Mass..	Lumber ..	4,000	1,050	5,050	1,050	4,000	3	3	3	33	33
Perth Amboy, N. J.	Gardiner, Me....	Clay.....	4,000	440	4,440	.....	4,440	5	5	5	5	5
Quincy, Mass.	New York, N. Y.	Granite ..	3,000	3,000	6,000	.....	6,000	4	4	3	9	9
Boston, Mass.	do.....	Salt.....	4,000	3,000	7,000	7,000	.....	7	7	...	...	...
do.....	Philadelphia, Pa.	.....	8,000	.....	8,000	500	7,500	7	7	6	27	27
Braunswick, Ga.	Providence, R. I.	Lumber ..	27,000	7,000	34,000	30,000	4,000	5	5	5	15	15
Baltimore, Md.	Wiscasset, Me..	Corn.....	4,000	3,231	7,231	.....	7,231	4	4	4	*12	12
do.....	Belfast, Me.....	do.....	2,000	1,400	3,400	.....	3,400	4	3	1	3	9
Fishing-grounds.	Provincetown, Mass.	Fish....	5,000	75	5,075	5,075	.....	12	12	...	...	...

* Captain insensible from cold and exhaustion, was restored by efforts of crew of the station.

† Body recovered and cared for.

UNITED STATES LIFE-SAVING SERVICE.

DISTRICT NO. 2, COAST OF

Date.	Place.	No. of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1877.						
Jan. 17	Three-fourths mile north of station.	12	Sc. Perit	Halifax, N. S.	Chadrey ..	592
Feb. 20	Three and one-fourth miles south of station.	10	Sc. Thomas R. Pillsbury.	Thomaston, Me ...	Pitcher ...	414
Mar. 9	Big Mioxo Pond	14	Bark W. F. Marshall.	St. John's, N. B ...	Wright ...	940
Mar. 12	One mile northeast of station	12	Sc. Artic	Rockland, Me	Ginn	81
Mar. 17	Four and one-half miles south of station.	11	Sc. Jonathan May ...	Philadelphia, Pa ..	Neal	326
Mar. 21	Little Mioxo Pond	14	Bark Papa Luigi C..	Palermo, Italy ...	.....	720
Mar. 31	Newburyport Bar	1	Sc. Queen of the Bay.	Newburyport, Mass	Short	30
Mar. 31	.....do.....	1	Sc. Flying Fish.....	.....do.....	Thurlow ..	25
May 14	Two miles southwest of station No. 13.	13	Sc. Clara B. Chapman	Gloucester, Mass..	Butler	68
	Total.....					

DISTRICT NO. 3, COASTS OF

1876.						
Sept. 1	Southwest point Block Island	3	Sc. A. E. Stevens	Philadelphia, Pa ..	Montgomery.	239
Nov. 19	Two and one-half miles west of station.	11	Sc. Annie C. Cook ...	Thomaston, Me ...	Cook	223
Dec. 10	Three miles east of Montauk Light.	5	Sc. David Sprague...	New London, Conn	Howard...	38
Dec. 11	Near station	10	Ship Circassian	Liverpool, England	Williams..	1, 741
Dec. 11	Lloyd's Neck, L. I	36	Sc. Ida L. Ray	Deer Isle, Me	Houarce ..	300
Dec. 12	Opposite the station	29	Sc. Kate Grant	Philadelphia, Pa ..	Conary.....	132
Dec. 29	Near station	10	*Ship Circassian	Liverpool, England	Williams..	1, 741
1877.						
Jan. 24	One-fourth mile east of station.	32	Sc. James Lawrence.	Ellsworth, Me	Doliver ..	135
Mar. 14	Northwest point of Block Island.	3	Sc. Sophie	Portland, Me	Harrington	154
May 3	Near station	16	Sc. E. J. Erwin	Philadelphia, Pa ..	Johnson...	190
June 10	South part of Block Island...	3	Sc. Caroline Kienzie.	Bridgeton, N. J....	Dilke	207
June 14	Southwest part of Block Island.	3	Brig Loch Lomond ..	New York, N. Y....	Baker	277
	Total.....					

DISTRICT NO. 4, COAST

1876.						
Sept. 2	At station	15	Sc. Eliza Jane	Egg Harbor, N. J..	Birdsal...	45
Sept. 17	Ludlam's Beach	33	Sc. Thomas J. Lancaster.	Philadelphia, Pa ..	Hunter ...	653
Sept. 17	One-half mile north of station	14	Bark Magdalena	New York, N. Y....	Griffin ...	259
Oct. 7	South Bar, Hereford Inlet ...	36	Sc. John Mosser .....	.....do.....	Rhodes ...	93
Oct. 13	One-fourth mile north of station.	12	Sc. A. M. C. Smith ...	New London, Conn	Rogers ...	44
Oct. 16	Ten miles east of Absecom light-house.	27	Sc. Breeze	Port Jefferson, N. Y	Cramner ..	200
Nov. 23	Short Beach	23	Sc. Alice L. Pearce ..	Perth Amby, N. J.	Green	75

* For particulars of this disaster, see page 14 of report.

MASSACHUSETTS—Continued.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons sheltered at stations.	No. of days' shelter afforded.
Halifax, N. S.	New York, N. Y.	Potatoes, &c.	\$10,000	\$13,000	\$23,000	\$3,000	\$20,000	19	19	16	48	
New Orleans La.	Boston, Mass.	Cotton	30,000	70,000	100,000	100,000	.....	9	9	4	4	
Hampton Roads, Va.	St. John's, N. B.	.....	50,000	.....	50,000	.....	50,000	16	16	1	3	
Rockland, Me.	New York, N. Y.	Lime	3,500	1,500	5,000	5,000	.....	4	4	.....	.....
Boston, Mass.	Philadelphia, Pa.	.....	8,000	.....	8,000	.....	8,000	8	8	6	22	
Girgenti, Sicily.	Boston, Mass.	Brimstone.	35,000	21,000	56,000	.....	56,000	14	14	14	14	
Newburyport, Mass.	Fishing	.....	1,500	.....	1,500	.....	1,500	7	7	.....	.....
do	do	.....	800	.....	800	12	675	6	6	.....	.....
Gloucester, Mass.	George's Banks	Salt and ice.	5,000	300	5,300	2,500	2,800	11	11	.....	.....
.....	.....	.....	224,300	129,596	353,896	160,050	193,846	158	157	1	71	22

RHODE ISLAND AND LONG ISLAND.

Philadelphia, Pa.	Saco, Me	Coal	15,000	2,200	17,200	14,050	3,150	7	7	.....	.....
Bonair, West Indies.	Providence, R. I.	Salt	21,000	800	21,800	.....	21,800	9	9	6	12	
New York, N. Y.	Fishing cruise	.....	3,500	.....	3,500	2,500	1,000	6	6	6	18	
Liverpool, England.	New York, N. Y.	General	145,000	45,000	190,000	25,000	165,000	41	49	39	78	
Bangor, Me.	do	Timber	4,000	2,800	6,800	6,300	500	5	5	.....	.....
Jacksonville, Fla.	do	Lumber	6,000	2,000	8,000	.....	8,000	7	7	7	7	
.....	.....	General	.....	.....	.....	.....	.....	31	42	4	4	
Charleston, S. C.	New York, N. Y.	Rosin	6,000	2,500	8,500	2,000	6,500	7	7	7	14	
New Castle, Del.	Salem, Mass.	Corn	4,000	5,000	9,000	1,280	7,720	5	5	.....	.....
Virginia	Providence, R. I.	Oysters	2,000	2,000	10,000	9,875	125	8	8	.....	.....
Philadelphia, Pa.	Salem, Mass.	Coal	9,000	1,500	10,500	50	10,450	6	6	.....	.....
New York, N. Y.	Salonica, Turkey	Oil	15,000	20,000	35,000	34,000	1,000	8	8	.....	.....
.....	.....	.....	236,500	83,800	320,300	95,055	225,245	141	121	20	69	133

OF NEW JERSEY.

New York, N. Y.	Egg Harbor, N. J.	.....	2,500	.....	2,500	.....	2,500	6	6	6	36	
Boston, Mass.	Philadelphia, Pa.	Ice	30,000	5,000	35,000	.....	35,000	8	8	8	8	
Bolivia, South America.	New York, N. Y.	Cotton, &c.	20,000	45,000	65,000	43,000	22,000	12	12	.....	.....
Philadelphia, Pa.	Lynn, Mass.	Coal	7,000	500	7,500	7,500	.....	5	5	.....	.....
New York, N. Y.	Fishing	.....	4,000	.....	4,000	4,000	.....	8	8	.....	.....
Port Jefferson, N. Y.	Georgetown, D. C.	Ground bone.	6,000	10,000	16,000	14,800	1,200	6	6	.....	.....
Pamunkey River.	New York, N. Y.	Tomatoes	5,000	6,000	11,000	11,000	.....	6	6	.....	.....

DISTRICT NO. 4, COAST OF

Date.	Place.	No. of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1876.						
Dec. 3	North Bar, Turtle Gut Inlet.	38	Sc. E. Nickerson	Boston, Mass.	Haskill	198
Dec. 9	Horse-Shoe, Sandy Hook.	1	Sc. Herschel	Perth Amboy, N. J.	Chambers	450
Dec. 9	do	1	Sc. Samuel Wood	do	Stephens	80
Dec. 9	Sandy Hook Light	1	Sloop Gen. Thom	Portland, Me.	Stone	80
Dec. 9	do	1	Sc. Mary B. Curtis	do	Rich	80
Dec. 16	Turtle-Gut Bar	37	Sc. Babel H. Irons	Philadelphia, Pa.	Honck	224
Dec. 16	Main beach, south of Cold Spring Bar.	34	Sc. F. A. Reath	Bangor, Me.	Hutchinson	116
Dec. 26	Half way between Stations No. 10 and No. 11.	11	Brig Lillian Cameron.	Georgetown, P. E. I.	McDonald	199
Dec. 26	Ocean Park	7	Ship Rjukan	New York, N. Y.	Hanson	960
1877.						
Jan. 6	One mile south of station	10	Ship Simila	Portsmouth, N. H.	Saltors	1,110
Jan. 7	Seabright	3	St. Amerique*	Havre, France	Pouzolz	3,033
Jan. 22	"The Soda," Little Egg Harbor Inlet.	25	Sc. Mary J. Fisher	Philadelphia, Pa.	Camp	98
Jan. 30	Tucker's Beach	23	Sc. Caroline Augusta	New York, N. Y.	Colville	21
Feb. 2	do	25	Sc. S. J. Delan	Onancock, Va.	Mears	12
Feb. 6	One mile north of station	2	Sc. O. M. Marrett	New York, N. Y.	Reed	194
Feb. 7	One and one-fourth miles north of station.	25	Small boat.			
Feb. 14	South Bar, Cold Spring Inlet.	37	Sc. A. M. Ridgeway	Cape May, N. J.	Cresse	50
Feb. 18	Brigantine Shoals	25	Sc. Mary Standish	Boston, Mass.	Fuller	400
Feb. 20	One-half mile north of station	35	Sc. Hannie Westbrook.	Portland, Me.	McDuffee	139
Feb. 21	Cox's Shoal, Cape May	39	Sc. E. S. Newman	New York, N. Y.	Newman	392
Feb. 25	Eight miles southeast of Hereford light.	39	St. tug Corinne	do	Pitts	
Mar. 1	Cold Spring Bar	38	St. ship Agnes	do	Burdick	583
Mar. 2	One and one-fourth miles north of station.	13	Sc. Margaret and Lucy†	Middletown, Conn.	Wicks	400
Mar. 9	West end of Five-mile Beach	37	Bark Bethany	Sidney, Australia	Budell	359
Mar. 11	North bar of Turtle-Gut Inlet.	37	Sc. Frank B. Colton	Philadelphia, Pa.	Frambes	275
Mar. 15	South point of Cold Spring Bar.	37	Sc. Twilight	Great Egg Harbor, N. J.	Price	50
Mar. 17	Long Branch	4	St. Rusland	Antwerp, Belgium	Horsev	3,000
Mar. 28	South bar, Cold Spring Inlet	39	Sc. Addie Schlafer	New York, N. Y.	Deacon	178
Mar. 29	North bar of Townsend Inlet	34	Sc. Zulette Kenyon	Hartford, Conn.	Buckingham.	140
Apr. 1	South bar, Cold Spring Inlet	38	Sc. Constitution	Port Republic, N. J.	Johnson	13
Apr. 19	Three-fourths mile south of station.	18	Brig Magnus	Sweden	Edstrom	280
May 8	Cape May Point	40	Sc. Condova	Bristol, R. I.	Ryan	159
June 21	Hereford Bar	35	Sc. Onward	Eden, Me.	Mayo	94
Total						

* For particulars of this disaster, see page 22 of report.

† For particulars of this disaster, see page 25 of report.

NEW JERSEY—Continued.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons sheltered at stations.	No. of days shelter afforded.
Boston, Mass	Washington, D.C.	Salt	\$7,000	\$300	\$7,300	\$7,300	.....	7	7	.....	.....	.....
Baltimore, Md.	Sandy Hook, N.J.	Coal	15,000	360	15,360	15,160	\$300	7	7	.....	.....	.....
At anchor ...	.....	.....	6,000	.....	6,000	5,800	200	4	4	.....	.....	.....
Portland, Me	Baltimore, Md.	.....	20,000	.....	20,000	19,950	50	10	10	.....	.....	.....
...do	do .....	.....	20,000	.....	20,000	19,950	50	9	9	.....	.....	.....
Quincy, Mass	Philadelphia, Pa	Stone	16,000	1,000	17,000	16,800	200	7	7	7	14	.....
Philadelphia, Pa.	Warren, R. I.	Coal	2,000	500	2,500	.....	2,500	4	4	4	8	.....
Georgetown, P. E. I.	New York, N. Y.	Potatoes	6,000	10,000	16,000	.....	16,000	7	7	6	42	.....
London, England.	do .....	.....	25,000	.....	25,000	.....	25,000	20	20	18	9	.....
Marseilles, France.	do .....	.....	54,000	.....	54,000	.....	54,000	20	20	1	3	.....
Havre, France.	do	General	200,000	400,000	600,000	475,000	125,000	192	189	3	40	20
New Berne, N. C.	do	Tar and turpentine.	4,000	2,000	6,000	6,000	.....	4	4	.....	.....	.....
Gravesend, N. Y.	Fishing .....	.....	5,000	.....	5,000	5,000	.....	6	6	.....	.....	.....
Hog Island, Va.	New York, N. Y.	Corn	4,000	1,000	5,000	5,000	.....	4	4	.....	.....	.....
Porto Rico...	do	Oranges, &c.	12,000	3,000	15,000	14,500	500	7	7	.....	.....	.....
.....	Fishing .....	.....	30	.....	30	30	.....	1	1	.....	.....	.....
Philadelphia, Pa.	Cape May, N. J.	Coal	1,600	160	1,760	1,760	.....	3	3	.....	.....	.....
Georgetown, D. C.	Boston, Mass.	do	8,000	2,010	10,010	9,910	100	7	7	.....	.....	.....
Baltimore, Md.	Bucksport, Me.	Corn	4,500	3,800	8,300	.....	8,300	5	5	5	10	.....
Mataanzas	New York, N. Y.	Sugar ...	25,000	100,000	125,000	125,000	.....	10	10	.....	.....	.....
Norfolk, Va.	do	Hydraulic pumps	8,500	13,000	21,500	.....	21,500	5	5	5	5	.....
Philadelphia, Pa.	do	General	20,000	30,000	50,000	44,500	5,500	18	18	.....	.....	.....
New York, N. Y.	Charleston, S. C.	Guano &c.	16,000	20,000	36,000	.....	36,000	7	7	.....	.....	.....
Hong-Kong	New York, N. Y.	General	14,000	86,000	100,000	34,000	66,000	11	11	10	60	.....
Boston, Mass	Philadelphia, Pa	.....	5,000	.....	5,000	5,000	.....	7	7	.....	.....	.....
Philadelphia, Pa.	Atlantic City, N. J.	Coal	500	235	735	300	435	3	3	3	10	.....
Antwerp, Belgium.	New York, N. Y.	General	300,000	125,000	425,000	9,000	416,000	198	198	.....	.....	.....
Norfolk, Va.	do	Corn	7,000	6,000	13,000	11,200	1,800	6	6	.....	.....	.....
Orient, L. I.	Richmond, Va.	Guano ..	6,000	8,000	14,000	14,000	.....	6	6	.....	.....	.....
Port Republic, N. J.	Riverton, N. J.	do	1,000	300	1,300	12	1,288	3	3	.....	.....	.....
Pernambuco, Brazil.	New York, N. Y.	Sugar ...	7,250	33,000	40,250	31,250	9,000	9	9	.....	.....	.....
Bristol, R. I.	Philadelphia, Pa	.....	3,500	.....	3,500	.....	3,500	9	9	.....	.....	.....
Providence, R. I.	Wilmington, Del	Barrels..	3,000	300	3,300	150	3,150	4	4	.....	.....	.....
.....	.....	.....	901,380	912,465	1,813,845	956,872	856,973	677	667	10	113	225

DISTRICT NO. 5, COASTS OF DELA

Date.	Place.	No. of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1876. Dec. 1	Green Run Beach, Md	3	Sc. Ocean Bell	Rockland, Me	Mills	142
1877. Jan. 7	Five miles south of Cape Henlopen.	1	Brig Moses Day	Philadelphia, Pa ..	Crosby	341
Jan. 20	Cobb's Island, Va	7	Sc. Delphin	St. Pierre, W. I.	Desroses ..	69
Jan. 24	Ship Shoal.	4	Sc. H. Prescott	Portland, Me	Meriman ..	101
Jan. 27	Chincoteague Shoals	4	Sc. Geo. L. Treadwell	Portsmouth, N. H ..	Taylor	113
Feb. 18	Outer bar, Metompkin Inlet.	5	Sc. Alice Ida	Philadelphia, Pa ..	Price	45
Mar 10	Five miles south of station ..	3	Sc. Andrew Nebinger	do	Smith	294
Mar. 25	Two and one-half miles south of Cape Henlopen.	1	Sc. L. N. Lovell	Fall River, Mass ..	Borden	150
Mar. 26	South end Myrtle Island	8	Bark Galathea	Tvedestand, Norway.	Steansen ..	475
May 20	Little Machipongo Bar	6	Sc. Armenia Bartlett	Philadelphia, Pa ..	Smith	229
May 23	Two and one-half miles south southwest of station.	3	Sc. Mary E. Curtin ..	Tuckerton, N. J.	Craft	26
May 24	Rogues' Island Bar	6	Sc. Mary Wood	New York, N. Y.	Arthur	35
	Total					

DISTRICT NO. 6, COASTS OF

1876. Nov. 20	Seven miles south of station.	9	Sc. J. H. Lockwood ..	New York, N. Y ..	Hardcastle	191
Dec. 9	Opposite the station	1	Sc. Fannie K. Shaw ..	Thomaston, Me ..	Balano	295
Dec. 24	One and one-half mile south of station.	9	Bark America	Palermo, Italy	Dogostine ..	665
Dec. 25	Piper's Hill, N. O	5	Bark Tinto	Glasgow, Scotland ..	Larne	709
1877. Jan. 17	One and one-fourth miles north of station.	3	Bark Carpione	Genoa, Italy	Ferari	474
Jan. 20	Cape Henry Point	1	Bark Lilla	do	Pecasso	544
Mar. 22	Near station	1	Ship Winchester	London, England ..	McDonald ..	16
Mar. 26	Cape Henry	1	Bark Pantser	Liverpool, England	Johnson ..	350
Apr. 9	Two miles north of station ..	9	Sc. Iona	Brewer, Me		132
Apr. 10	Five miles north of Kitty Hawk Beach.	5	Sc. Edward J. Heraty	Philadelphia, Pa ..		171
Apr. 10	Two miles south of station ..	9	Sc. Benjamin W. Robinson.	do	Waples	340
May 4	Two and one-half miles south of station.	8	Sc. Hattie L. Fuller ..	Camden, N. J.	Smith	261
	Total					

DISTRICT NO. 7, COAST

1877. Feb. 11	Eleven miles north of station.	4	Ship Protector	Stavenger, Norway	Falch	851
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WARE, MARYLAND, AND VIRGINIA.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons sheltered at stations.	No. of days' shelter afforded.
Georgetown, D. C.	Bridgeport, Conn.	Coal . . .	\$8,000	\$1,000	\$9,000	.....	\$9,000	5	5	4	12	
Montevideo, S. Amer.	Philadelphia, Pa.	.....	8,000	.....	8,000	\$7,000	1,000	8	8	.....	.....
Martinique, W. I.	Baltimore, Md.	Sugar . . .	6,000	6,800	12,800	12,600	200	7	7	4	32	
Chesapeake Bay.	Portland, Me.	Oysters . .	3,500	630	4,130	3,900	230	6	6	.....	.....
Norfolk, Va.	New York, N. Y.	Corn . . .	12,000	3,000	15,000	.....	15,000	5	5	4	4	
Baltimore, Md.	do	Gas-pipes .	2,000	8,000	10,000	9,700	300	6	6	.....	.....
Doboy Island, Ga.	Philadelphia, Pa.	Lumber . .	24,000	15,000	39,000	31,000	8,000	7	7	7	7	
Fall River, Mass.	do	.....	6,000	.....	6,000	5,500	500	5	5	.....	.....
Cadiz, Spain.	Hampton Roads, Va.	.....	11,000	.....	11,000	9,750	8,250	12	12	9	9	
Philadelphia, Pa.	Washington, D. C.	Coal . . .	10,000	1,600	11,600	.....	11,600	6	6	.....	.....
Hog Island, Va.	Little Egg Harbor, N. J.	Salt . . .	3,000	250	3,250	3,100	150	3	3	.....	.....
Chuckatuck, Va.	New York, N. Y.	Oysters . .	5,000	200	5,200	5,200	.....	4	4	.....	.....
.....	.....	.....	98,500	36,480	134,980	80,750	54,230	74	74	28	64	

VIRGINIA AND NORTH CAROLINA.

Jacksonville, Fla.	New York, N. Y.	Lumber . .	5,000	4,000	9,000	.....	9,000	6	6	.....	.....
Saint Mary's, Ga.	Baltimore, Md.	do . . .	10,000	5,000	15,000	10,500	4,500	9	9	9	27	
Amsterdam	do	.....	12,000	.....	12,000	.....	12,000	14	14	14	168	
Androsen, Scotland.	do	Coal . . .	8,000	2,000	10,000	.....	10,000	17	17	14	42	
Leith, Scotland.	do	.....	16,000	.....	16,000	6,200	9,800	14	14	14	56	
Italy	do	.....	15,000	.....	15,000	.....	15,000	13	13	.....	.....
Liverpool, England.	Hampton Roads, Va.	.....	30,000	.....	30,000	15,000	15,000	27	27	.....	.....
do	do	.....	14,734	.....	14,734	.....	14,734	11	11	.....	.....
Jacksonville, Fla.	Philadelphia, Pa.	Ice . . .	5,000	175	5,175	.....	5,175	*	.....	.....	.....
Philadelphia, Pa.	Havana, Cuba	Lumber . .	8,000	10,000	18,000	.....	18,000	*	.....	.....	.....
Saint Mary's, Ga.	Washington, D. C.	Coal . . .	29,000	1,600	30,600	.....	30,600	8	8	.....	.....
.....	.....	Lumber . .	20,000	2,400	22,400	.....	22,400	*	.....	.....	.....
.....	.....	.....	172,734	25,175	197,909	31,700	166,209	119	119	51	293	

OF FLORIDA.

Pensacola, Fla.	Norway	Rosin and deals	17,000	9,720	26,720	26,720	20	20	20	10	
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* No one on board when discovered.

DISTRICT NO. 9, COASTS OF

Date.	Place.	No. of station.	Name of vessel.	Where owned.	Master.	Tonnage.
1876. Nov. 14	Ottawa Point, Lake Huron...	2	Sc. William Home...	Clayton, N. Y.	Keller	305
1877. Apr. 28	North Point Reef.....	4	St. S. C. Baldwin....	Saint Clair, Mich..	Walker ...	418
May 16	South side of Thunder Bay Island.	4	St. Cleveland.....	Cleveland, Ohio ...	Macaulay ..	462
May 16	.....do.....	4	Sc. O. J. Hale.....	.....do	Pierson	326
June 20	Four miles east of station....	6	St. City of New York	.....do	Leonard....	1,200
	Total.....					

DISTRICT NO. 10, COAST

1876. Oct. 5	Near north pier, Saint Joseph	6	Sc. Grace Greenwood	Chicago, Ill.	Bryson....	306
Oct. 9	One-half mile north of Grand Haven pier.	5	Sc. Island Queen	Grand Haven, Mich	Martin....	121
Oct. 9	South of south pier, Grand Haven.	5	Sc. Two Charlies ....	.....do	Buiden....	87
Oct. 9	One-fourth mile north of Grand Haven pier.	5	Sc. Minnie Corlett...	Muskegon, Mich ..	Williamson	106
Oct. 9	North side of north pier, Grand Haven.	5	Sc. H. D. Moore.....	Saugatuck, Mich ..	Roades....	143
Nov. 6	Near north pier, Saint Joseph	6	Sc. Kate A. Howard	Holland, Mich.....	Murry	
Nov. 14 1877.	Racine Harbor.....	9	Sc. Home.....	Racine, Wis.....	Anderson	91
Mar. 6	Off Saint Joseph.....	6	St. Sweet Brothers ..	Saint Joseph, Mich	Myer	
June 3	Nine miles east-southeast of station.	7	Small open scow	Chicago, Ill.		
	Total.....					

RECAPITU

	Total number of vessels driven ashore.	Total value of vessels.	Total value of cargoes.
District No. 1	22	\$185,830	\$64,772
District No. 2	21	224,300	129,596
District No. 3	12	236,500	83,600
District No. 4	40	901,380	912,465
District No. 5	12	98,500	36,480
District No. 6	12	172,734	25,175
District No. 7	1	17,000	9,720
District No. 8			
District No. 9	5	114,000	31,000
District No. 10	9	56,500	13,580
Aggregate.....	134	1,986,744	1,306,588

LAKES HURON AND SUPERIOR.

Where from.	Where bound.	Cargo.	Estimated value of vessel.	Estimated value of cargo.	Total.	Estimated amount saved.	Estimated amount lost.	No. of persons on board.	No. of persons saved.	No. of persons lost.	No. of persons sheltered at stations.	No. of days' shelter afforded.
Kincardine, Ontario.	Chicago, Ill.	Salt	\$12,000	\$5,000	\$17,000	\$15,000	\$2,000	9	9			
Milwaukee, Wis.	Wyandotte, Mich.	Iron-ore	30,000	6,000	36,000	29,000	7,000	15	13			
Ogdensburg, N. Y.	Chicago, Ill.		40,000		40,000	39,800	200	15	15			
do	do		20,000		20,000	20,000		7	7			
Oswego, N. Y.	Duluth, Minn.	Railroad-iron.	12,000	20,000	32,000	23,000	9,000	41	41			
			114,000	31,000	145,000	126,800	18,200	85	85			

OF LAKE MICHIGAN.

Escanaba, Mich.	Michigan City, Mich.	Iron-ore	7,000	2,000	9,000		9,000	6	6			
Grand Haven, Mich.	Chicago, Ill.	Timber, &c.	3,000	2,500	5,500	1,500	4,000	6	6			
Chicago, Ill.	Grand Haven, Mich.		3,000		3,000		3,000					
Muskegon, Mich.	Michigan City, Mich.	Lumber	5,000	3,000	8,000	7,000	1,000	7	7			
do	Chicago, Ill.	do	8,000	3,000	11,000	7,000	4,000					
Grand Haven, Mich.	Michigan City, Mich.	do	5,000	1,070	6,070	4,070	2,000	5	5			
Frankfort, Mich.	Racine, Wis.	do	1,500	1,760	3,260	1,260	2,000	6	6			
Saint Joseph, Mich.	Fishing cruise	Fish, &c.	4,000	250	4,250	4,250		6	6			
Chicago, Ill.	do							2	2			
			30,500	13,580	50,080	25,080	25,000	38	38			

LATION.

Total amount of property imperiled.	Total amount of property saved.	Total amount of property lost.	Total number of lives imperiled.	Total number of lives saved.	Total number of lives lost.	Total number of shipwrecked persons sheltered at stations.	Total number of days' shelter afforded.	Number of disasters involving total loss of vessel and cargo.
\$250,602	\$237,340	\$13,262	180	180		8	16	
353,896	160,050	193,846	158	157	1	79	222	9
320,300	95,055	225,245	149	121	28	69	133	2
1,813,845	956,872	856,973	677	667	10	113	235	10
134,980	80,750	54,230	74	74		28	64	1
197,909	31,700	166,209	119	119		51	293	9
26,720		26,720	20	20		20	10	1
145,000	126,800	18,200	85	85				
50,080	25,080	25,000	38	38				2
3,293,332	1,713,647	1,579,685	1,500	1,461	39	368	963	34

ABSTRACT'S
OF RETURNS OF
WRECKS AND CASUALTIES TO VESSELS
WHICH HAVE OCCURRED ON AND NEAR THE
COASTS AND ON THE RIVERS OF THE UNITED STATES,
AND TO
AMERICAN VESSELS AT SEA AND ON THE COASTS OF
FOREIGN COUNTRIES,
DURING THE
FISCAL YEAR ENDING JUNE 30, 1877.

WRECKS, CASUALTIES, AND COLLISIONS AT HOME AND ABROAD.

REMARKS EXPLANATORY OF THE WRECK-STATISTICS FOR THE YEAR 1876-'77.

The following is the fourth annual statement of wrecks and casualties which have occurred on or near the coasts and on the rivers of the United States, and to American vessels at sea or on the coasts of foreign countries.

The statistics relating to disasters upon our own coast are compiled from reports obtained and received through the officers of the customs in compliance with the act of June 20, 1874. Those relating to disasters which have occurred to American shipping in foreign waters are derived from reports received from our consular officers abroad and through the courtesy of officers of foreign governments, an interchange of such information having been effected, through the Department of State, with most other maritime nations.

In the preparation of the accompanying tables, it has been found advisable, in order to facilitate reference, to make the following general divisions:

I. Disasters occurring on the Atlantic and Gulf coasts of the United States, embracing—

1. All casualties outside of, but in proximity to, the coast line;
2. All casualties occurring in the bays and harbors adjacent to the coasts named;
3. All casualties occurring in or near the mouths of rivers emptying into the ocean or gulf.

II. Disasters occurring upon the Pacific coast of the United States, including those occurring in adjacent waters, as in the first division.

III. Disasters occurring on the great lakes, embracing—

1. All casualties occurring on Lakes Superior, Michigan, Huron, Saint Clair, Erie, or Ontario, reported by officers of the customs, whether in waters under the jurisdiction of the United States or of Great Britain;
2. All casualties occurring in the rivers, straits, &c., connecting the several lakes named;
3. All casualties occurring in the harbors of any of said lakes, or in or near the mouths of rivers emptying into them, within the United States.

IV. Disasters occurring in rivers within the United States, embracing all rivers except those referred to in the foregoing division.

V. Disasters occurring to American shipping at sea or in foreign waters.

The disasters embraced in the foregoing divisions are classified as follows, viz:

1. *Foundering*s—embracing foundering's which resulted from the leaking or capsizing of vessels, but not those which resulted from collision, stranding, or striking any sunken wreck, or against piers, snags, or ice.

2. *Strandings*—embracing disasters resulting from running aground, striking a rock, reef, bar, or other natural object, although the vessel may have foundered as a result of such casualty.

3. *Collisions*—embracing all collisions between vessels only.

4. *Other causes*—embracing disasters resulting from various causes, as follows, viz:

- Fire, irrespective of result;
- Scuttling, or any intentional damage to vessel;
- Collisions with fields or quantities of ice, although vessel may be sunk thereby;
- Striking on sunken wrecks, anchors, buoys, piers, or bridges;
- Leakage (except when vessel foundered or went ashore for safety)
- Loss of masts, sails, boats, or any portion of vessel's equipments;
- Capsizing, when vessel did not sink;
- Damage to machinery;
- Fouling of anchors;
- Striking of lightning;
- Explosion of boilers;
- Breakage of wheels;
- Also water-logged, missing, and abandoned vessels.

Since the publication of the annual statement for the fiscal year ending June 30, 1876, information has been received of the occurrence of disasters during that year to 43 American vessels. The localities and nature of these casualties were as follows:

On the Atlantic and Gulf coasts, fourteen, viz: two by foundering, two by stranding, six by collision, and four from other causes; of these last, three resulting in total loss.

On the Pacific coast, six, viz: two by stranding, two by collision, and two from other causes. The two strandings and one of the casualties from other causes resulted in total loss.

On the great lakes, two by collision.

On the rivers, six, viz: two by foundering, one by stranding, two by collision, and one from other causes.

At sea or in foreign waters, fifteen, viz: one by foundering, two by stranding, two by collision, and ten from other causes. Of these, one foundering, one stranding, one collision, and two disasters from other causes resulted in total loss.

The loss of twenty-five lives has been reported since the publication of the last annual statement, as follows: a crew of eight persons on a vessel never heard from and supposed foundered; thirteen persons lost by two other casualties; and four persons lost where no damage was sustained by vessel or cargo. All of the above losses occurred at sea or in foreign waters.

As the foregoing could not properly be included in the report for the fiscal year just closed, it is thought advisable to reprint the general summary table of the previous year, amended so as to include the particulars furnished by the wreck-reports mentioned above. The table will be convenient for the purpose of comparison with the corresponding table in the statement of the present year, and is accordingly herewith presented.

Summary of disasters to vessels which occurred on and near the coasts and on the rivers of the United States, and to American vessels at sea and on the coasts of foreign countries, during the fiscal year ending June 30, 1876.

Nature of casualties.	Number of vessels.	Aggregate tonnage.	Wreck involving total loss.	Casualties involving partial damage.	Number of lives lost.
Foundering:					
Atlantic and Gulf coasts	48	8,424.99	33	15	32
Pacific coast	6	798.21	6	.....	23
Great lakes	18	7,619.83	11	7	55
Rivers	5	617.04	2	3	.....
At sea or in foreign waters	19	5,956.75	19	.....	66
Total	96	23,416.82	71	25	176
Strandings:					
Atlantic and Gulf coasts	426	78,392.94	132	294	48
Pacific coast	36	8,969.52	25	11	35
Great lakes	132	43,956.51	26	106	6
Rivers	21	5,567.39	4	17	.....
At sea or in foreign waters	87	34,372.11	60	27	22
Total	702	171,278.47	247	455	111
Vessels collided:					
Atlantic and Gulf coasts	383	102,100.46	20	363	19
Pacific coast	12	4,459.95	3	9	236
Great lakes	164	54,892.37	2	162	13
Rivers	29	12,307.73	6	23	5
At sea or in foreign waters	31	18,760.88	4	27	28
Total	619	192,521.39	35	584	301
Other causes:					
Atlantic and Gulf coasts	283	63,683.33	29	254	99
Pacific coast	9	3,257.23	3	6	14
Great lakes	203	53,940.93	13	190	13
Rivers	61	23,662.27	27	34	52
At sea or in foreign waters	197	99,894.10	36	161	119
Total	753	244,437.86	108	645	297
Unknown causes:					
At sea or in foreign waters	3	2,037.69	1	2	.....
Grand total	2,173	633,692.23	462	1,711	*885

RECAPITULATION.

Atlantic and Gulf coasts	1,140	252,601.72	214	926	198
Pacific coast	63	17,504.91	37	26	308
Great lakes	517	160,409.64	52	465	87
Rivers	116	42,154.43	39	77	57
At sea or in foreign waters	337	161,021.53	120	217	235
Total	2,173	633,692.23	462	1,711	*885

	Atlantic and Gulf coasts.	Pacific coast.	Great lakes.	Rivers.	At sea or in foreign waters.	Aggregate.
Total value vessels involved.	\$18,054,375	\$729,100	\$8,517,300	\$2,323,150	\$6,972,200	\$36,596,125
Total value cargoes involved.	6,855,167	133,350	3,177,788	1,684,380	7,402,061	19,252,746
Aggregate	24,909,542	862,450	11,695,088	4,007,530	14,374,261	55,848,871
Total insurance on vessels.	4,462,115	257,300	3,592,466	814,500	3,541,625	12,668,006
Total insurance on cargoes.	2,964,463	24,942	2,155,717	1,493,997	3,533,194	10,172,313
Aggregate	7,426,578	282,242	5,748,183	2,308,497	7,074,819	22,840,319
Total losses to vessels.	2,780,612	530,100	1,237,858	917,030	2,619,588	8,094,188
Total losses to cargoes.	797,965	85,200	598,726	837,455	1,214,517	3,533,863
Aggregate	3,578,577	624,300	1,836,584	1,754,485	3,834,105	11,628,051
Total tonnage vessels involved.	252,601.72	17,504.91	160,409.64	42,154.43	161,021.53	633,692.23
Total tonnage vessels lost.	33,285.61	9,456.51	13,417.76	14,046.95	43,957.47	114,164.30

* In addition to the number of lives lost, here reported, 95 lives were lost where no other casualty occurred to the vessel, making the total number of lives lost 980.

As the appended tables include all casualties involving losses as low as \$50 for the purpose of exhibiting their nature, causes, and localities, the character of vessels, loss of life, and other information of importance, the following table of disasters, involving damage amounting to \$500 and upward (damage less than that amount to vessels and cargoes being considered unimportant in a pecuniary sense), is subjoined, the corresponding table for the two previous years being also reprinted for the purpose of comparison.

Fiscal year ending June 30, 1875.

	Amount of losses.														
	\$500 to \$1,000.	\$1,000 to \$2,000.	\$2,000 to \$5,000.	\$5,000 to \$10,000.	\$10,000 to \$20,000.	\$20,000 to \$30,000.	\$30,000 to \$40,000.	\$40,000 to \$50,000.	\$50,000 to \$75,000.	\$75,000 to \$100,000.	\$100,000 to \$200,000.	\$200,000 to \$300,000.	\$300,000 and over.	Unknown.	Total.
Atlantic and Gulf coasts	87	81	86	47	31	11	5	3	3	3	4	2	65	426	
Pacific coast	2	5	6	7	6	1	1	1	1	1	2	...	6	37	
Great lakes	51	25	42	20	12	7	5	3	5	1	...	...	61	238	
Rivers	11	10	12	11	8	5	1	2	4	3	1	...	13	81	
At sea or in foreign waters	12	15	42	36	24	16	8	4	5	4	7	1	1	16	191
Total	163	136	188	121	87	40	20	13	17	11	14	1	1	161	973

Fiscal year ending June 30, 1876.

	Amount of losses.														
	\$500 to \$1,000.	\$1,000 to \$2,000.	\$2,000 to \$5,000.	\$5,000 to \$10,000.	\$10,000 to \$20,000.	\$20,000 to \$30,000.	\$30,000 to \$40,000.	\$40,000 to \$50,000.	\$50,000 to \$75,000.	\$75,000 to \$100,000.	\$100,000 to \$200,000.	\$200,000 to \$300,000.	\$300,000 and over.	Unknown.	Total.
Atlantic and Gulf coasts	148	136	123	69	43	16	4	3	5	2	...	...	2	91	642
Pacific coast	7	4	7	16	2	2	1	1	1	1	1	...	...	7	56
Great lakes	58	29	56	25	15	6	6	4	2	2	2	...	...	17	222
Rivers	8	10	13	14	11	4	2	3	5	...	2	...	1	6	79
At sea and in foreign waters	36	29	46	56	50	26	12	11	3	1	3	...	2	7	282
Total	257	208	245	180	127	54	25	22	16	6	8	...	5	128	1,281

Fiscal year ending June 30, 1877.

	Amount of losses.																													
	\$500 to \$1,000.		\$1,000 to \$2,000.		\$2,000 to \$5,000.		\$5,000 to \$10,000.		\$10,000 to \$20,000.		\$20,000 to \$30,000.		\$30,000 to \$40,000.		\$40,000 to \$50,000.		\$50,000 to \$75,000.		\$75,000 to \$100,000.		\$100,000 to \$200,000.		\$200,000 to \$500,000.		\$500,000 and over.		Unknown.		Total.	
Atlantic and Gulf coasts	155	107	119	72	42	13	10	2	8	....	4	....	1	55	588													
Pacific coast	4	6	10	2	1	2	1	1	1	1	1	1	1	2	30															
Great lakes	29	18	25	9	9	7	....	1	1	1	1	1	1	11	111														
Rivers	15	20	28	17	14	2	3	2	3	....	1	....	4	109														
At sea and in foreign waters	50	53	87	66	53	33	9	15	17	9	11	2	2	33	440															
Total	253	204	260	166	119	57	23	20	30	10	17	2	3	105	1,278															

The subjoined table shows, by localities, the total number of vessels meeting with casualties, the total values of vessels and cargoes, the totals of losses to both and the total tonnage of vessels involved and of vessels totally lost during the fiscal years 1875-'76 and 1876-'77, with the percentages of increase or decrease of the latter compared with the former.

Total number of vessels involved.

	1875-'76.	1876-'77.	Per cent.
Atlantic	1, 140	1, 003	Decrease of 12.02 per cent.
Pacific	63	52	Decrease of 17.46 per cent.
Great lakes	517	295	Decrease of 42.94 per cent.
Rivers	116	175	Increase of 50.86 per cent.
At sea or in foreign waters	337	537	Increase of 59.34 per cent.
Aggregate	2, 173	2, 062	Decrease of 5.10 per cent.

Total value of vessels and cargoes involved.

	1875-'76.	1876-'77.	Per cent.
Atlantic	\$24, 909, 542	\$25, 581, 876	Increase of 2.69 per cent.
Pacific	862, 450	2, 220, 908	Increase of 157.39 per cent.
Great lakes	11, 695, 088	6, 046, 489	Decrease of 48.29 per cent.
Rivers	4, 007, 530	5, 177, 635	Increase of 29.19 per cent.
At sea or in foreign waters	14, 374, 261	23, 355, 202	Increase of 6.25 per cent.
Aggregate	55, 848, 871	62, 382, 110	Increase of 11.60 per cent.

Total loss to vessels and cargoes.

	1875-'76.	1876-'77.	Per cent.
Atlantic	\$3, 578, 577	\$3, 783, 656	Increase of 5.73 per cent.
Pacific	624, 300	367, 179	Decrease of 41.18 per cent.
Great lakes	1, 836, 584	692, 992	Decrease of 62.26 per cent.
Rivers	1, 754, 485	962, 424	Decrease of 45.15 per cent.
At sea or in foreign waters	3, 834, 105	8, 539, 333	Increase of 122.72 per cent.
Aggregate	11, 628, 051	14, 345, 584	Increase of 23.37 per cent.

Total tonnage of vessels involved.

	1875-'76.	1876-'77.	Per cent.
Atlantic	252, 601. 72	255, 319. 12	Increase of 1.07 per cent.
Pacific	17, 504. 51	28, 489. 06	Increase of 62.63 per cent.
Great lakes	160, 409. 64	96, 755. 05	Decrease of 39.68 per cent.
Rivers	42, 154. 43	49, 256. 02	Increase of 16.80 per cent.
At sea or in foreign waters	161, 021. 53	212, 182. 87	Increase of 31.77 per cent.
Aggregate	633, 692. 23	641, 982. 12	Increase of 1.32 per cent.

Total tonnage of vessels totally lost.

	1875-'76.	1876-'77.	Per cent.
Atlantic	33, 285. 61	44, 384. 51	Increase of 33.34 per cent.
Pacific	9, 456. 51	5, 123. 04	Decrease of 45.83 per cent.
Great lakes	13, 417. 76	8, 288. 73	Decrease of 38.22 per cent.
Rivers	14, 046. 95	11, 526. 28	Decrease of 17.94 per cent.
At sea or in foreign waters	43, 957. 47	70, 577. 39	Increase of 60.56 per cent.
Aggregate	114, 164. 30	139, 899. 95	Increase of 22.54 per cent.

From the foregoing figures it will be seen that the total number of casualties in the year 1876-'77 was 5.10 per cent. less than in the year preceding; that on the Atlantic and Gulf and Pacific coasts there was a slight decrease; on the lakes a very heavy decrease, viz, 42.94 per cent.; and on the rivers and at sea a yet larger increase, 50.86 and 59.34 per cent. respectively.

At the same time it appears that the total of losses, and, except upon the lakes, the values of vessels and cargoes and the tonnage of vessels involved and of vessels sustaining total loss, have been considerably in excess of those of the year 1875-'76. The diminution in the statistics of disasters on the great lakes and the increase in those on the rivers and at sea are both probably attributable to the same cause, viz: the unusual severity of the winter, resulting on the lakes in an earlier and more protracted closing of navigation than for several years past, while frequent and furious storms at sea, and disastrous ice-blockades on the rivers (like that at Saint Louis, in the month of January), occasioned a larger number and a more serious class of casualties to ocean and river shipping. To this cause also may, perhaps, be assigned the fact above mentioned, that even where the number of casualties is smaller, the values and tonnages involved, and the amounts of losses have increased.

It would be natural to suppose that, in a season of such unwonted rigor as the last, a greater number of vessels of high tonnages would be lost and damaged, while lesser craft (coasters, fishing-smacks, &c.), warned by nautical prescience and the cautionary signals of the United States Signal-Service, would-keep prudently in port, or seek the nearest harbors on the approach of storms. This inference is confirmed by the wreck-statistics for the year, as above shown.

On the 30th of June, 1877, the total number of registered, enrolled, and licensed vessels belonging to the United States was 25,386, representing a tonnage of 4,242,599.66. Of this number 1,953, having a total tonnage of 594,914.98, met with casualties during the year, being nearly 8 per cent. of the total number of vessels, and 14 per cent. of the aggregate tonnage.

The following exhibit shows the number of steam and sailing vessels, canal-boats, and barges registered, enrolled, and licensed, belonging to the United States on June 30, 1877; the number of each class which have met with disasters during the year, and the ratio of casualties to the number of vessels:

Classification.	No. of vessels belonging to the United States.	No. of casual- ties to ves- sels.	Ratio of casu- alties to num- ber of ves- sels.
Steam-vessels	4,395	385	As 1 to 11.4
Sailing-vessels	18,081	1,550	As 1 to 11.7
Canal-boats	996	.....	.....
Barges	1,914	18	As 1 to 106.3
Total.....	25,386	1,953	As 1 to 13.

During the year, 599 vessels were reported as having met with collisions, but as two vessels were engaged in each collision (though in a few instances three or more collided with each other in gales, ice-blockades,

&c.) the actual casualties of this nature were about one-half that number.

Ninety foreign vessels, having an aggregate tonnage of 44,559.23, met with disasters in American waters. The nationalities of these vessels are shown in certain of the accompanying tables.

In addition to the lives lost in the disasters to vessels, which are embraced in the tables, seventy-four persons perished by drowning, out of crews employed on sixty-three different vessels. In these instances, neither vessels nor cargoes suffered damage, the persons drowned having been lost overboard, or having perished by the capsizing of small boats in which they had left their vessels to attend fishing-trawls, or for some other purpose. These vessels are not included in the following statements, except in Table 63.

The following exhibit shows the number of persons on board vessels suffering casualties, the number of lives lost, the ratio of those lost to the number on board, and the ratio of lives lost to the number of casualties for the last three fiscal years :

Fiscal year.	Number of casualties.	Number of persons on board.	Number of lives lost.	Ratio of lives lost to number on board.	Ratio of lives lost to number of casualties.
1874-'75.....	1,610	90,216	*894	As 1 to 22.6	As 1 to 1.8
1875-'76.....	2,173	23,602	*885	As 1 to 26.6	As 1 to 2.4
1876-'77.....	2,062	28,139	*817	As 1 to 34.4	As 1 to 2.5

* This number is exclusive of lives lost where vessels suffered no damage.

During the year 1876-'77, 155 casualties occurred, resulting in loss of life, exclusive of the 74 lives lost from the 63 vessels above mentioned. It will accordingly be seen that of the whole number of casualties about 1 in 13 resulted in loss of life. For the year 1875-'76, the proportion was 1 in 19, and for the year previous 1 in 16, although a glance at the above table will show that the total number of lives lost in each of those years was larger than for the year just closed. This is accounted for by the fact that in each of the previous years a large proportion of the number of lives lost was embraced in a disaster of exceptional fatality: in the year 1874-'75, the burning of the steamer Japan, with a loss of 406 lives, and in the following year the sinking of the steamer Pacific by the ship Orpheus, with a loss of 236 lives.

During the past year the disasters attended with the largest loss of life have been those of the British ship Circassian (which is recounted at length on page 14 of the foregoing report), with the loss of 28 lives; the ship George Green, near Dartmouth, England, January 27, 1877, with a loss of 24 lives, and the steamers George Cromwell, January 5, and George Washington, January 20, 1877, the two last casualties occurring within a few miles of each other on the coast of Newfoundland, and resulting in the total loss of the vessels with all on board, 30 and 25 lives respectively.

In the report for the fiscal year ending June 30, 1876, attention was called to the fact that numerous disasters, many more doubtless than are so reported, arise from the unseaworthy condition in which vessels are sent to sea. This statement is amply confirmed by the returns of casualties for the fiscal year just closed, which continue to present instances of vessels foundering in comparatively smooth seas, of apparently slight collisions, with singularly fatal effects, and of stranded

shipping, in no extraordinary stress of weather, going suddenly to pieces; disasters only to be explained on the theory of the unsoundness or improper lading of vessels, and involving a criminal disregard of human life on the part of certain owners, agents, and officers.

It has again been observed in the preparation of the following tables from the reports furnished, that the statements of the causes of casualties, on many occasions, where those navigating the vessel involved were evidently in fault, were not unfrequently attended with prevarication. This disposition has been especially noticeable in cases of collision, the commanders of the respective vessels concerned endeavoring to shift the responsibility of the accident upon each other. In such cases it is difficult to settle the blame upon the proper party without judicial investigation. To illustrate this tendency, a column will be found in the table of causes of collision, in the several divisions of the report, headed "Fault of other vessel."

Where disasters have been reported as arising from misplaced or unpainted buoys, errors or omissions in charts, shifting of bars, channels, &c., copies of the reports have been furnished the Light-House Board and United States Coast Survey.

ATLANTIC AND GULF COASTS.

TABLE 1.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the number and value of vessels and cargoes, and amount of loss to same, where known.

Months.	Total value of vessels.			Total value of cargoes.			Loss to vessels.			Loss to cargoes.		
	Number.	Amount.	Number of vessels, value unknown.	Number.	Amount.	Number of cargoes, value unknown.	Number.	Amount.	Number of vessels totally lost, amount unknown.	Number of vessels damaged, amount unknown.	Number.	Amount.
July	48	\$557,100	4	37	\$135,367	4	45	\$80,641	7	15	\$12,950	26
August	44	1,331,300	5	28	131,484	7	39	49,131	10	8	5,880	27
September	105	950,230	9	76	276,905	10	105	195,141	9	41	66,619	45
October	89	3,026,500	4	58	872,947	4	86	189,822	7	22	65,371	40
November	77	1,711,200	9	56	403,546	10	74	271,268	12	21	90,576	43
December	163	2,877,740	6	106	1,951,782	6	161	490,831	8	56	177,140	56
January	66	1,073,400	6	53	915,105	6	67	296,275	5	26	49,756	33
February	44	857,076	1	29	312,624	2	41	170,842	4	17	78,889	14
March	95	1,806,150	4	63	955,191	6	93	683,002	6	32	229,900	37
April	125	1,896,100	9	88	922,807	14	123	312,102	11	43	70,686	58
May	52	1,331,900	5	31	285,793	7	46	83,425	11	10	27,042	28
June	32	796,600	1	21	203,024	1	31	67,455	2	9	12,920	15
Total	940	18,215,296	63	646	7,366,580	79	911	2,889,935	92	304	891,721	422

*In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 2.

TABLE 2.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the number of vessels totally lost, the number damaged, aggregate tonnage of vessels totally lost, number of passengers and crew, and number of lives lost.

Months.	Number of disasters resulting in total loss to vessels.	Number of disasters resulting in partial damage to vessels.	Whether total or partial loss unknown.	Number of casualties resulting in no damage to vessels.	Total.	Total tons burden of vessels totally lost.	Total number of crew, including master, &c.	Total number of passengers.	Total number of lives lost.
July	11	34	3	4	52	1,512.08	357	34	5
August	8	31	6	4	49	346.15	504	680	28
September	21	84	8	1	114	3,067.38	656	207	20
October	14	72	4	3	93	2,249.80	853	2,136	1
November	14	60	9	3	86	2,762.17	701	1,011	71
December	41	120	4	4	169	12,228.75	1,290	290	12
January	16	51	5	2	72	2,653.84	692	108	7
February	13	28	2	2	45	4,353.74	399	168	9
March	29	64	2	4	90	7,565.35	868	230	35
April	25	98	11	.....	134	4,821.50	1,028	322	13
May	10	36	11	.....	57	1,531.90	467	361	3
June	10	21	2	.....	33	1,231.85	350	454	204
Total	212	699	67	25	1,003	44,384.51	8,165	6,001	204

TABLE 3.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the number of vessels and cargoes insured and uninsured, and the amount of insurance where known.

Months.	Number of vessels and cargoes reported to be insured, and the amount of insurance.				Total amount of insurance.	Number of ves- sels and cargoes reported not insured.		Number of ves- sels and cargoes, whether insured or not unknown.		Vessels in ballast.
	Vessels.		Cargoes.			Vessels.	Cargoes.	Vessels.	Cargoes.	
	Number.	Amount.	Number.	Amount.						
July	13	\$151,650	11	\$24,555	\$176,205	33	21	6	9	11
August	10	206,750	6	29,112	235,862	34	17	5	12	14
September	24	144,905	29	117,428	262,333	80	42	10	15	28
October	21	246,900	21	80,000	326,900	67	23	5	18	31
November	21	320,425	21	52,692	373,117	56	30	9	15	20
December	45	667,950	38	1,153,388	1,821,338	116	52	8	22	57
January	23	259,675	26	394,666	654,341	41	18	8	15	13
February	16	154,726	14	81,967	236,693	25	9	4	8	14
March	30	515,440	32	461,420	976,860	56	23	13	14	30
April	48	285,950	37	590,480	876,430	75	35	11	30	32
May	12	442,625	9	54,460	497,085	39	19	6	10	19
June	10	331,500	9	93,995	425,495	21	11	2	4	9
Total	273	3,728,496	253	3,134,163	6,862,659	643	300	87	172	278

TABLE 4.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, distinguishing the nature of each casualty.

Nature of casualties.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Foundered	3	3	7	2	2	8	1	..	5	7	2	1	41
Stranded	12	12	33	21	23	77	30	25	48	32	6	9	328
Collided	18	24	38	36	48	42	18	22	22	42	38	10	344
Capsized	2	2	3	5	..	5	..	2	1	1	..	1	21
Damage to hull, rudder, and rigging, and loss of sails, anchors, &c	7	3	16	16	7	20	7	3	10	24	6	3	121
Disasted	5	1	2	4	1	2	..	..	1	5	..	..	21
Damage to machinery .....	..	1	1	2	2	1	2	1	3	2	..	..	15
Bilged	1	..	..	..	..	..	..	..	..	..	..	..	1
Explosion of boiler .....	..	..	..	..	..	3	..	..	..	..	..	..	3
Fire	1	..	..	5	..	2	1	..	4	..	3	3	19
Fouled buoy, anchors, &c .....	..	1	..	..	..	..	..	..	1	..	..	..	2
Abandoned .....	..	..	..	..	..	1	..	..	..	..	..	..	1
Lost boat, &c .....	..	..	..	..	..	..	1	..	..	4	..	..	5
Lost deck-load .....	..	..	2	..	..	1	..	1	1	2	..	..	7
Ice .....	..	..	..	..	..	..	7	1	..	..	..	..	8
Miscellaneous .....	..	..	3	1	..	2	1	..	2	4	1	1	15
Sprung a leak	3	1	7	2	1	..	4	4	1	6	1	2	32
Struck wharf, bridge, &c .....	..	1	1	..	2	5	..	..	..	4	..	2	15
Struck by lightning .....	..	..	1	..	..	..	..	..	..	..	..	1	2
Water-logged .....	..	..	..	1	..	..	..	..	..	1	..	..	2
Total	52	49	114	93	86	169	72	45	99	134	57	33	1,003

TABLE 5.—Abstract of returns of disasters (excluding collisions) to vessels and cargoes on the Atlantic and Gulf coasts during the year ending June 30, 1877, distinguishing the cause of each disaster.

Class and cause of disaster.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
CLASS 1.—Arising from stress of weather :													
Foundered		1	7	1	2	4			2	5	1		23
Stranded	2	3	16	8	9	37	11	7	13	14	1		120
Capsized	2	1	2	3		4			1	1		1	15
Damaged hull and rigging, lost sails, anchors, &c.	2	2	10	9	6	10	7	3	8	24	3	1	85
Dismasted	3	1	1	3	1	3				3			15
Lost deck-load			2			1		1	1	1			6
Lost boats			1			1				3			5
Miscellaneous			2			1	2		1	1			7
Sprung a leak	1		4	2			4	2	1	4		1	19
Struck wharf, &c.			1										1
Struck by lightning	3		1									1	5
Total	13	8	47	26	18	61	24	13	26	56	5	4	301
CLASS 2.—Arising from carelessness, inattention, ignorance, &c. :													
Error in judgment	1	1	2		2	4	2	1		1	1	1	16
Error of pilot		2				2		2					6
Carelessness				1				1	1	1			4
Ignorance						1		1	1			1	4
Total	1	3	2	1	2	7	2	5	2	2	1	2	30
CLASS 3.—Arising from defects of vessels or equipments :													
Decayed mast			1			1							2
Defective hull	2							1					3
Defective compass		1				1			3				6
Defective iron				2			1	1		1			5
Total	2	1	1	2		2	2	2	3	1			16
CLASS 4.—Arising from other causes :													
Adverse currents	2		2	3		3	2	1	4	1		1	19
Accidental	1	1		2	1	2	1						8
Absence of buoy			1			1			1			1	4
Explosion of boiler				1		3							4
Dragged anchor	1			1		4	1		2		1	1	11
Fire	1			3		2		4			3	3	16
High winds	2		4	5	3	13		2	2	6	1	1	39
Heavy sea	1	1	2	1	1				1	3			10
Light winds		1	1	1	1								4
Miscellaneous		1	2	1			2	1	5	4		1	17
Missstayed			1	1		3		1	2	1		1	10
Sprung a leak	3	3	4	1	2	5		1	3	2	1	1	26
Struck bridge, pier, wreck, &c.				2	2	5		1		1		1	12
Darkness					2	1				1			4
Thick and foggy weather	4	4	3	3	1	3	8	4	10	5	2	4	51
Tides	1		2	1	1	1	1	3	2	1		1	14
Mistaken lights						1			1	2			4
Parted chains, &c.						9	1		1	5			16
Ice							8		1				9
Broken shaft									1				1
Fouled anchor									1				1
Want of pilot									1				1
Total	16	11	22	26	15	55	24	15	43	30	8	16	281
Unknown	2	2	4	2	3	2	2	2	3	3	5	1	31
Aggregate	34	25	76	57	38	127	54	37	77	92	19	23	659

TABLE 6.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the number of vessels collided and distinguishing the cause of each disaster.

Causes.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Accidental.....	4	2	2	2	4	4	2	2	2	2	2	2	16
Bad management.....	2	2	2	2	6	6	2	2	4	6	4	2	36
Carelessness.....	2	2	2	10	2	2	2	2	2	2	2	2	40
Error in judgment.....	2	2	2	2	2	2	2	2	2	2	2	2	14
Darkness.....	2	2	2	2	2	2	2	2	2	4	2	2	10
Adverse currents.....	2	2	2	2	6	2	2	2	2	2	2	2	8
"Fault of other vessel".....	4	2	2	6	12	4	2	2	2	2	4	2	48
Error of pilot.....	2	2	2	2	2	2	2	2	2	2	2	2	10
Stress of weather.....	2	2	4	2	6	2	2	2	2	2	6	2	26
Tides.....	2	2	2	2	2	2	2	2	2	2	2	2	6
Thick and foggy weather.....	4	4	2	4	4	2	6	2	2	2	6	4	38
Want of proper lights.....	2	2	2	2	2	2	2	2	2	2	2	2	12
Unavoidable.....	2	4	2	4	2	2	2	2	2	2	4	2	14
Dragged anchor.....	2	2	2	2	2	2	2	2	2	2	2	2	14
Ice.....	2	2	2	2	2	2	2	2	2	2	2	2	4
High winds.....	2	2	2	2	2	2	2	2	2	2	2	2	6
Unknown.....	4	6	2	2	6	2	2	2	4	12	4	2	42
Total.....	18	24	38	36	48	42	18	8	22	42	38	10	344

TABLE 7.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the number of vessels and distinguishing their description.

Description of vessels.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Barges.....	2	2	2	2	2	2	2	1	1	2	3	1	2
Barks.....	2	2	2	2	3	4	5	5	10	2	3	1	42
Brigs.....	2	2	2	4	6	3	3	1	5	8	1	2	33
Brigantines.....	2	2	2	2	2	2	1	2	2	2	2	2	3
Ferry-boats.....	2	2	1	3	2	2	2	2	2	2	2	2	4
Schooners.....	38	25	92	55	65	120	54	31	64	92	30	15	681
Scows.....	2	2	2	2	2	2	2	2	2	2	2	2	2
Ships.....	1	2	1	1	2	5	1	1	1	2	3	2	16
Sloops.....	2	5	9	2	2	5	1	1	3	4	3	1	35
Steamers.....	2	15	10	17	12	25	7	4	10	19	14	14	149
Steamships.....	2	2	2	2	2	2	2	2	2	2	2	2	8
Steam yachts.....	2	2	2	2	2	2	2	2	2	2	2	2	1
Yachts.....	2	4	2	2	4	2	1	1	1	4	2	1	4
Unknown.....	2	4	2	2	4	2	1	1	1	4	2	2	23
Total.....	52	49	114	93	86	169	72	45	99	134	57	33	1,003

TABLE 8.—Abstract of returns of disasters to foreign vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing nationality and description, and distinguishing those totally lost and those partially damaged.

Nationality and rig.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total.		Aggregate.
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	
Belgian steamship.																										1	
British bark.		1																								10	
British brig.																										5	
British schooner.																										3	
British steamer.		1																								12	
British ship.																										11	
French bark.																										2	
French brig.																										3	
German bark.																										1	
German brig.																										1	
German brigantine.																										1	
German ship.																										1	
Italian bark.																										1	
Italian brig.																										1	
Norwegian bark.																										1	
Norwegian schooner.																										3	
Nowegian ship.																										1	
Spanish steamer.																										12	
Spanish vessel.																										7	
Spanish bark.																										1	
Swedish bark.																										1	
Swedish brig.																										1	
Total.	3	1	1	5	1	2	4	4	5	9	5	6	3	6	1	2	2	3	4	1	2	2	2	23	41	64	
Aggregate.	4	1	5	3	3	3	4	4	9	5	11	9	9	9	3	2	64										

TABLE 9.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the tonnage and distinguishing the number of those totally lost and those partially damaged.

Burden of vessel.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Un- known.		Total.		Aggregate.						
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.							
Not exceeding 50 tons	3	6	5	2	6	17	2	11	4	12	12	27	4	8	8	8	9	12	2	20	7	5	1	5	50	141	191						
Over 50 and not exceeding 100 tons	4	9	3	6	5	21	13	13	2	19	19	39	5	8	9	5	10	19	2	32	10	4	3	.....	.....	41	144	185					
Over 100 and not exceeding 200 tons	2	11	1	9	5	25	6	19	4	12	14	28	5	15	3	6	16	13	36	3	11	3	4	.....	.....	63	192	255					
Over 200 and not exceeding 300 tons	1	2	.....	2	1	9	3	15	2	3	1	14	.....	7	3	4	11	5	19	2	23	3	3	.....	.....	22	90	112			
Over 300 and not exceeding 400 tons .....	.....	1	.....	2	2	6	.....	3	1	6	1	9	.....	4	3	5	6	1	9	.....	2	.....	.....	.....	.....	14	52	66
Over 400 and not exceeding 500 tons .....	.....	.....	.....	4	1	4	.....	1	3	1	.....	6	.....	5	1	3	4	.....	6	.....	.....	.....	.....	.....	.....	6	35	41
Over 500 and not exceeding 600 tons	1	1	.....	1	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	15	16
Over 600 and not exceeding 700 tons	1	15	16						
Over 700 and not exceeding 800 tons	1	15	16					
Over 800 and not exceeding 900 tons	1	15	16				
Over 900 and not exceeding 1,000 tons	1	15	16			
Over 1,000 and not exceeding 1,100 tons	1	15	16		
Over 1,100 and not exceeding 1,200 tons	1	15	16	
Over 1,200 and not exceeding 1,300 tons	1	15	16
Over 1,300 and not exceeding 1,400 tons	1	15	16
Over 1,400 tons	1	15	16
Unknown	1	15	16
Total	11	41	8	41	21	93	14	79	14	72	41	128	16	56	13	32	70	25	109	10	47	10	23	.....	.....	212	791	1,063					
Aggregate	52	49	49	114	93	86	169	72	45	99	134	57	33	1,063	

Note.—In the columns of "Partial loss" in this table are included the casualties in which the vessels sustained no damage, for the number of which see appropriate column in Table 2.

TABLE 10.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the number of vessels and distinguishing age.

Age.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Not exceeding 3 years.....	7	13	20	10	12	23	12	13	15	19	8	4	156
Over 3 and not exceeding 7 years.....	9	7	9	18	17	22	11	7	12	32	10	4	164
Over 7 and not exceeding 10 years.....	3	5	18	11	10	26	12	5	11	18	7	8	134
Over 10 and not exceeding 14 years.....	2	5	18	21	8	21	17	4	25	22	11	5	159
Over 14 and not exceeding 20 years.....	10	5	14	8	5	25	7	8	10	12	5	5	114
Over 20 and not exceeding 25 years.....	7	4	13	7	6	15	3	3	5	14	4	4	85
Over 25 and not exceeding 30 years.....	6	22	10	7	10	10	4	1	9	2	3	1	65
Over 30 and not exceeding 35 years.....	1	22	1	1	2	4	2			3	1	1	12
Over 35 and not exceeding 40 years.....	2	1	3	1	5	2	1		3		1	1	20
Over 40 and not exceeding 45 years.....			2	1	3	3		1					10
Over 45 and not exceeding 50 years.....				1					1				2
Over 50 years.....				1									1
Unknown.....	5	5	6	6	8	12	3	3	8	12	7		75
Total.....	52	49	114	93	86	169	72	45	99	134	57	33	1,003

TABLE 11.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the number of vessels and distinguishing their cargoes.

Cargoes.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Agricultural tools.....									1				1
Assorted.....			1	1	1	1	1			1		1	7
Ballast.....	11	14	22	31	20	57	13	14	30	32	19	9	278
Brimstone.....	1						1						3
Cement.....	2				1				1				4
Cocoa-nuts.....				1		1							2
Coal.....	10	6	26	14	17	20	7	6	9	25	10	7	157
Coffee, sugar, molasses, &c.....	1	1	2			7	5	1	7	11	2	2	39
Cotton, &c.....			2	4	3	4	3	1	2	2			20
Fertilizers.....				2		1						1	10
Fish and fishing gear.....	2	4	4	2	3	6	5		5	3	1	1	32
Fruits and vegetables.....	2	1		1		3	1				2	1	13
Grain, &c.....			2		2	2	3	1	2	6	2		21
Hay.....	1		2			1	1			2			7
Hides.....							2	1					5
Ice.....	3	1	3	2	1		2	1	1	1			17
Iron.....	2	2	2	3	4	2	1	1	2	3	1		23
Laths and shingles.....	1	1					1						3
Lime, plaster, rosin, &c.....	1			1	1	4	1	1	1	1			10
Logwood, &c.....	1	1		1		3		1	1	1		2	11
Lumber and timber.....	5	3	14	8	8	14	5	8	7	21	2		95
Merchandise.....	22	4	5	4	3	11	2	3	8	4	2	2	56
Miscellaneous.....	2		3	3	2	5	1	1	3		2	2	26
Naval stores, &c.....			3		1					3			7
Oil, &c.....					1	2							3
Oysters.....			1	1	2	8	5		4	1			22
Petroleum, &c.....								1		2			3
Provisions, &c.....		2		1	1	3	3		1				11
Phosphate rock, &c.....				2				1					3
Rubber.....								1					1
Salt.....		1			1	2	3	1		3		1	12
Stone and brick.....		1	2	4		7	1		1	1	1		18
Wood.....	2	1	6	3	5	2		1	2		1	1	24
Unknown.....	3	6	7	4	9	3	5	1	4	9	5	1	57
Total.....	52	49	114	93	86	169	72	45	99	134	57	33	1,003

TABLE 12.—Summary—Atlantic and Gulf coasts.

Nature of casualties.	Number of vessels.	Total number of tons.	Laden.	Ballast.	Unknown whether laden or not.	Total loss.	Partial and unknown loss.	Number of passengers.	Number of crew.	Total on board.	Total number of lives lost.
Founderingings	41	3,437.78	34	7	.....	29	12	21	165	186	27
Strandings	328	75,292.34	242	86	.....	131	197	565	2,496	3,061	92
Vessels collided	344	107,901.90	179	109	56	22	332	4,196	3,035	7,231	12
Other causes	290	68,687.10	214	76	.....	30	260	1,219	2,469	3,688	73
Total	1,003	255,319.12	609	278	56	212	*791	6,001	8,165	14,166	204

* In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 2.

PACIFIC COAST.

TABLE 13.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number and value of vessels and cargoes and amount of loss, to same, where known.

Months.	Total value of vessels.			Total value of cargoes.			Loss to vessels.			Loss to cargoes.		
	Number.	Amount.	Number of vessels value known.	Number.	Amount.	Number of cargoes value known.	Number.	Amount.	Number of vessels totally lost, amount unknown.	Number of vessels damaged, amount unknown.	Number.	Amount.
July	1	\$300	.....	1	\$325	.....	1	\$200	.....	.....	1	\$50
August	3	175,000	.....	3	108,223	.....	2	11,505	.....	1	2	2,525
September	3	35,200	.....	.....	.....	.....	3	325	.....	.....	.....	.....
October	4	186,500	.....	2	15,000	.....	4	182,175	.....	2	10,500	1
November	5	172,000	1	.....	.....	3	5	7,650	.....	1	.....	3
December	7	253,500	3	4	27,100	2	7	8,500	.....	3	2	600
January	4	81,000	2	.....	9,000	.....	4	40,825	.....	.....	.....	2
February	3	62,000	.....	3	81,300	.....	3	7,224	.....	2	1,300	1
March	4	140,200	.....	1	15,000	1	4	77,600	.....	.....	1	1
April	3	254,500	.....	3	205,000	.....	2	4,500	.....	1	1	3,000
May	4	245,000	.....	1	25,000	.....	3	525	.....	1	.....	1
June	6	96,000	1	3	3,700	.....	6	7,450	.....	1	2	425
Total	47	1,731,200	5	23	489,708	8	44	348,779	.....	*2	12	18,400

In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 14.

TABLE 14.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number of vessels totally lost, the number damaged, aggregate tonnage of vessels totally lost, number of passengers and crew, and the number of lives lost.

Months.	Number of disasters resulting in total loss to vessels.	Number of disasters resulting in partial damage to vessels.	Whether total or partial loss unknown.	Number of casualties resulting in no damage to vessels.	Total.	Total tons burden of vessels totally lost.	Total number of crew, including master, &c.	Total number of passengers.	Total number of lives lost.
July		1			1		1	2	
August		3			3		71	36	
September	1	2			3	12.24	13		
October	2	2			4	2,039.16	30	12	9
November	1	5			6	44.56	87	45	
December	2	6		2	10	52.30	169	193	3
January	2	2			4	1,376.19	56		
February	1	2			3	52.61	29		
March	3	1			4	1,509.89	37	1	
April	1	1		1	3	6.43	62		
May		3		1	4		50	162	
June	1	5		1	7	29.62	255	6	
Total	14	33		5	52	5,123.04	860	457	12

TABLE 15.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number of vessels and cargoes insured and uninsured, and the amount of insurance, where known.

Months.	Number of vessels and cargoes reported to be insured, and amount of insurance.				Number of vessels and cargoes reported not insured.		Number of vessels and cargoes, whether insured or not unknown.		Vessels in ballast.	
	Vessels.		Cargoes.		Total amount of insurance.	Vessels.	Cargoes.	Vessels.		Cargoes.
	Number.	Amount.	Number.	Amount.						
July					\$64,000	1	1			
August	2	\$64,000			\$64,000		1	1	2	
September	1	9,000			9,000	2				
October	3	27,500	2	\$10,000	37,500		1	1	1	
November	5	138,500			138,500			1	3	
December	3	14,500			14,500	5	4	2	2	
January	3	53,500			53,500	1	2			
February	3	55,500	1	\$0,000	135,500		2			
March	3	25,900			25,900	1	2			
April	2	7,800	1	2,000	9,800	1	1		1	
May	1	7,000			7,000	3	1			
June	2	15,600			15,600	4	3	1		
Total	28	418,800	4	92,000	510,800	18	18	6	9	2

TABLE 15.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, distinguishing the nature of each casualty.

Months.	Stranded.	Collided.	Fire.	Capsized.	Lost sails, rigging, anchors, cables, &c.	Sprung a leak.	Miscellaneous.	Total.
July				1				1
August	2						1	3
September	1	2						3
October	4							4
November	1	2			1	1	1	6
December	3	6					1	10
January	3				1			4
February	1		1		1			3
March	4							4
April	1	2						3
May		4						4
June	2	4					1	7
Total	22	20	1	1	3	1	4	52

TABLE 17.—Abstract of returns of disasters (excluding collisions) to vessels and cargoes on the Pacific coast during the year ending June 30, 1877, distinguishing the cause of each disaster.

Class and cause of disaster.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
CLASS 1.—Arising from stress of weather:													
Stranded		1	1	2	1	2	2	1	1				11
Parted chains						1							1
Missed												1	1
Total		1	1	2	1	3	2	1	1			1	13
CLASS 2.—Arising from carelessness, inattention, ignorance, &c.:													
Error in judgment				1			1						2
Fault of tug-towing		1											1
Total		1		1			1						3
CLASS 3.—Arising from defects of vessels or equipments:													
Defective machinery		1		1									2
Total		1		1									2
CLASS 4.—Arising from other causes:													
Heavy sea					1	1			1				3
Strong winds							1	1					2
Sprung a leak					1								1
Adverse currents									2	1		1	4
Capsized	1							1					1
Fire													1
Miscellaneous												1	1
Total	1				2	1	1	2	3	1		2	13
Unknown					1								1
Aggregate	1	3	1	4	4	4	4	3	4	1		3	32

TABLE 18.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number of vessels collided, and distinguishing the cause of each disaster.

Months.	Dragged anchor.	Stress of weather.	Carelessness, error in judgment, &c.	Unknown.	Total.
July.....					
August.....					
September.....			2		2
October.....					
November.....	2				2
December.....			4	2	6
January.....					
February.....					
March.....					
April.....			2		2
May.....			4		4
June.....		4			4
Total.....	2	4	12	2	20

TABLE 19.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number of vessels, and distinguishing their description.

Description of vessels.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Barks.....					1	1	2						4
Ferry-boats.....						1							1
Schooners.....		1	1	2	2	3		1	3	2	1	4	20
Ships.....				1	2		2	1	1			2	9
Sloops.....	1		1	1							1		4
Steamers.....			1		1	4		1			2		9
Steamships.....		2				1				1		1	5
Total.....	1	3	3	4	6	10	4	3	4	3	4	7	52

TABLE 20.—Abstract of returns of disasters to foreign vessels on the Pacific coast during the year ending June 30, 1877, showing nationality and description and distinguishing those totally lost and those partially damaged.

Nationality and rig.	Total loss.	Partial loss.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
British ship.....															
British steamer.....															
French bark.....															
Total.....			1		1		1		2					1	6
Aggregate.....			1		1		1		2					1	6

UNITED STATES LIFE-SAVING SERVICE.

E 21.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the tonnage and distinguishing the number of those totally lost and those partially damaged.

Burden of vessels.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total.		Aggregate.
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	
Not exceeding 50 tons.....	1				1				1		2				1		1		1				1		8		13
Over 50 and not exceeding 100 tons.....		1						1		1				1			1		1		1		1		5		9
Over 100 and not exceeding 200 tons.....							1							1											1		1
Over 200 and not exceeding 300 tons.....							1							1											1		2
Over 300 and not exceeding 400 tons.....																											
Over 400 and not exceeding 500 tons.....																											
Over 500 and not exceeding 600 tons.....																											
Over 600 and not exceeding 700 tons.....																											
Over 700 and not exceeding 800 tons.....																											
Over 800 and not exceeding 900 tons.....																											
Over 900 and not exceeding 1,000 tons.....																											
Over 1,000 and not exceeding 1,100 tons.....																											
Over 1,100 and not exceeding 1,200 tons.....																											
Over 1,200 and not exceeding 1,300 tons.....																											
Over 1,300 and not exceeding 1,400 tons.....																											
Over 1,400 tons.....																											
Unknown.....																											
Total.....	1	3	1	2	2	2	2	2	1	5	2	2	2	2	1	2	3	1	1	2	4	1	6	14	38	52	22
Aggregate.....	1	3	3	4	6	10	4	4	3	4	3	4	3	4	3	4	3	4	3	4	4	7	52	52	52	52	52

NOTE.—In the columns of "Partial loss," in this table, are included the casualties in which the vessel sustained no damage, for the number of which see appropriate column in Table 14.

TABLE 22.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number of vessels and distinguishing age.

Age.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Not exceeding 3 years		1	1	2		4							10
Over 3 and not exceeding 7 years			1	1	1	1	1	1	2	2	2	2	10
Over 7 and not exceeding 10 years		1	1		1	1		1	1	1	1	2	10
Over 10 and not exceeding 14 years		1			2	1	1						5
Over 14 and not exceeding 20 years	1					1		1				1	4
Over 20 and not exceeding 25 years					1	1	2				1	1	6
Over 25 and not exceeding 30 years			1			1							2
Over 30 and not exceeding 35 years													
Over 35 and not exceeding 40 years													
Over 40 and not exceeding 45 years				1									
Over 45 and not exceeding 50 years					1	1						1	5
Unknown									1				
Total	1	3	3	4	6	10	4	3	4	3	4	7	52

TABLE 23.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number of vessels and distinguishing their cargoes.

Cargoes.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Ballast			3		3	4	2		2			4	21
Coal		1		1		1	1					1	4
Furniture						1							1
Grain					1	1							2
Hay and barley							1						1
Jute													1
Lumber						1							1
Machinery				1						1			2
Merchandise				1	1	2				1		1	6
Ores, salt, &c		1											1
Oysters													1
Provisions	1									1			2
Stock													2
Straw						1					1	1	3
Wood		1	1						1				3
Unknown					1	1							2
Total	1	3	3	4	6	10	4		4	3	4	7	52

TABLE 24.—Summary—Pacific coast.

Nature of casualties.	Number of vessels.	Total number of tons.	Laden.	Ballast.	Unknown whether laden or not.	Total loss.	Partial and unknown loss.	Number of passengers.	Number of crew.	Total on board.	Total number of lives lost.
Strandings	22	7,979.13	14	8		13	9	14	182	196	11
Vessels collided	20	14,445.02	7	11	2	1	19	353	519	872	
Other causes	10	6,044.91	8	2			10	90	159	249	1
Total	52	28,469.06	29	21	2	14	*38	457	860	1,317	12

* In this column are included the casualties in which no damage was sustained by the vessel, for the number of which see appropriate column in Table 14.

GREAT LAKES.

TABLE 25.—*Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number and value of vessels and cargoes, and amount of loss to same, where known.*

Months.	Total value of vessels.		Number of vessels value known.	Total value of cargoes.		Number of cargoes value known.	Loss to vessels.		Number of vessels totally lost, amount unknown.	Loss to cargoes.		Number of cargoes totally lost, amount unknown.	Number of cargoes not damaged, or damage unknown.
	Number.	Amount.		Number.	Amount.		Number.	Amount.		Number.	Amount.		
July	26	\$565,150	18	\$206,195	23	\$25,105	3	2	\$5,600	16			
August	12	442,500	7	92,710	14	53,137	4	2	27,590	7			
September	50	824,450	1 36	155,747	3 46	84,309	5	12	48,864	27			
October	65	764,200	51	246,607	1 63	164,027	2	23	6,440	29			
November	15	212,500	1 15	104,767	1 18	25,690	1	7	1,300	9			
December	6	56,000	5	3,300	6	13,850	3	3	300	2			
January													
February													
March	1	1,200					1		1,570	3			
April	10	110,300	1 5	18,540	1 9	10,825	2 2	3	72,772	31			
May	49	1,060,500	3 39	694,362	2 47	94,851	5 10	10	2,420	30			
June	39	423,500	7 26	107,963	8 39	54,342	7 4	4					
Total	292	4,520,300	13 202	1,526,189	16 265	526,136	*30 64	166,856	154				

* In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 26.

TABLE 26.—*Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels totally lost, the number damaged, aggregate tonnage of vessels totally lost, number of passengers and crew, and number of lives lost.*

Months.	Number of disasters resulting in total loss to vessels.	Number of disasters resulting in partial damage to vessels.	Whether total or partial loss unknown.	Number of casualties resulting in no damage to vessels.	Total.	Total tons burden of vessels totally lost.	Total number of crew, including master, &c.	Total number of passengers.	Total number of lives lost.
July	3	20		3	26	331.73	273	186	27
August	14	34	1	4	18	1,723.50	175	17	17
September	2	47		4	51	4,224.22	502	60	9
October	16	14	1	2	65	790.81	514	2	8
November	4	4		19	6	153.57	129	1	
December	2						37	5	
January									
February									
March									
April	2	7	1	1	11	27.75	83	7	2
May	4	42	3	3	52	1,037.15	522	17	3
June		39	7		46		358	60	
Total	39	226	13	17	295	8,288.73	2,599	355	49

TABLE 27.—*Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels and cargoes insured and uninsured, and the amount of insurance, where known.*

Months.	Number of vessels and cargoes reported to be insured, and amount of insurance.				Total amount of insurance.	Number of vessels and cargoes reported not insured.		Number of vessels and cargoes, whether insured or not, unknown.		Vessels in ballast.
	Vessels.		Cargoes.			Vessels	Cargoes.	Vessels.	Cargoes.	
	No.	Amount.	No.	Amount.						
July	11	\$132, 000	7	\$60, 404	\$192, 404	12	8	3	3	8
August	5	83, 600	4	59, 710	143, 310	8	2	5	1	11
September	31	411, 000	12	80, 428	491, 428	19	24	1	3	12
October	34	336, 800	25	148, 034	484, 834	29	21	2	6	13
November	9	67, 000	3	6, 240	73, 240	8	10	2	3	3
December			3			4	3	2	2	1
January										
February										
March						1				1
April	1	22, 000	1	4, 000	26, 000	7	2	3	3	5
May	28	444, 835	20	420, 125	864, 960	15	10	9	11	11
June	17	199, 300	6	39, 300	238, 600	20	14	9	14	12
Total	136	1, 696, 535	78	818, 241	2, 514, 776	123	94	36	46	77

TABLE 28.—*Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, distinguishing the nature of each casualty.*

Nature of casualties.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Foundered			4	3	2	1					2		12
Stranded	3		7	18	6	4				2	2	9	57
Collided	12	14	14	10	6					4	27	26	113
Dismasted			2	5						1			8
Damaged sails, rigging, &c	3	1	10	13	3						1	2	33
Damaged machinery	1		1								3	4	9
Lost anchors, chains, &c				2									2
Lost deck-load			2	2						1			5
Lost center-board	1		3	3	1						1		9
Fire	1	2	2	1	1						3	2	12
Lightning										1			1
Ice						1			1		3		5
Sprung a leak		1	4	2						1	2	1	11
Struck dock, bridge, &c	3		1	2							2		9
Miscellaneous	2		1	3								1	7
Never heard from				1						1			2
Total	26	18	51	65	19	6			1	11	52	46	295

TABLE 29.—Abstract of returns of disasters (excluding collisions) to vessels and cargoes on the great lakes during the year ending June 30, 1877, distinguishing the cause of each disaster.

Class and cause of disaster.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
CLASS 1.—Arising from stress of weather:													
Foundered			1		2	1					1		5
Stranded	2		4	12	4	3				2		3	31
Sprung a leak		1	2	1						1	1		6
Struck by lightning										1			1
Damaged hull, rigging, &c	3	1	13	18	2						1	2	40
Struck piers, bridges, &c	1			1									2
Cargo damaged			2	2						1			5
Total	6	2	22	34	8	4				5	4	5	90
CLASS 2.—Arising from carelessness, ignorance, &c.:													
Negligence, carelessness, &c		1	1	1								3	6
Fault of tug towing	2			1							1	2	6
Total	2	1	1	2							1	5	12
CLASS 3.—Arising from defects in vessels or equipments:													
Defective rigging, &c				1	1					1			3
Defective machinery			1								1	1	3
Error in compass				1									1
Error in chart						1							1
Total			1	2	1	1				1	1	1	8
CLASS 4.—Arising from other causes:													
Adverse currents			1	1									2
Heavy sea	2		4	5									11
Thick and foggy weather											5	3	8
Dragged anchors				1	1								2
Misstayd				1									1
Sprung a leak			3	3	1								10
Machinery disabled	1									2		1	6
Struck piers, bridges, piles, &c	2									1			3
Fire	1	1	1	1	1					1	2		8
Incendiarism										1			1
Spontaneous combustion			1							1			2
Ice					1	1			1		3		6
Never heard from				1						1			2
Miscellaneous			1	2							1		4
Total	6	1	11	15	4	1			1	1	17	9	66
Unknown			2	2							2		6
Aggregate	14	4	37	55	13	6			1	7	25	20	182

TABLE 30.—*Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels collided and distinguishing the cause of each disaster.*

Cause of disaster.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Stress of weather.....													4
Thick and foggy weather.....	2	2	12									6	16
Absence of proper lights.....				12	12								4
Drifting.....	2			12	12								4
Accidental.....					2								6
Carelessness.....	2	4	6	2									24
Mismanagement.....					2								4
Error in steering.....				2									10
Misunderstanding signals.....		4	2		2								2
"Fault of other vessel".....		2		2									6
Narrow channel.....												4	4
Ice.....											5		5
Unknown.....	6	2	12							4		4	12
Total.....	13	14	14	10	6					4	27	26	113

TABLE 31.—*Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels and distinguishing their description.*

Description of vessels.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Barges.....		2	2	3							6		13
Barks.....		1	3	2							1		7
Brigs.....		1											1
Schooners.....	12	5	34	46	15	3			1	6	27	32	187
Scows.....	1		1							1	2	1	6
Sloops.....					1								1
Steamers.....	7	9	11	14	3	3				4	14	10	75
Steam-barges.....											1	3	4
Unknown.....											1		1
Total.....	26	12	51	65	19	6			1	11	52	46	295

TABLE 32.—*Abstract of returns of disasters to foreign vessels on the great lakes during the year ending June 30, 1877, showing nationality and description, and distinguishing those totally lost and those partially damaged.*

Nationality and rig.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total.	
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.
British schooners.....		1					4	1	6														2		1	13
British steamers.....				1																					1	1
British scows.....																							1		1	1
Total.....	1	1	1	1	4	1	6																3		1	15
Aggregate.....	1	1			4	7																	3		16	

TABLE 33.—Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the tonnage and distinguishing the number of those totally lost and those partially damaged.

Burden of vessels.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total.		Aggregate.
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	
Not exceeding 50 tons.....	1	3	1	1	1	1	1	5	1	1	1	1	1	1	1	1	2	1	2	1	1	1	1	1	6	14	30
Over 50 and not exceeding 100 tons.....	1	3	1	1	1	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1	3	5	1	1	6	17	34
Over 100 and not exceeding 200 tons.....	1	4	1	2	10	4	16	1	1	1	2	1	1	1	1	1	1	1	4	1	6	6	6	7	7	52	59
Over 200 and not exceeding 300 tons.....	1	3	1	1	15	2	7	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	6	56	62
Over 300 and not exceeding 400 tons.....	1	3	3	3	6	4	9	1	1	1	1	1	1	1	1	1	1	1	1	1	7	13	13	7	8	40	48
Over 400 and not exceeding 500 tons.....	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	4	4	3	13	16	48
Over 500 and not exceeding 600 tons.....	1	1	1	1	1	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	1	7	8
Over 600 and not exceeding 700 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	11
Over 700 and not exceeding 800 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	3	1	1	1	6	6
Over 800 and not exceeding 900 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	3	3
Over 900 and not exceeding 1,000 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3
Over 1,000 and not exceeding 1,100 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3
Over 1,100 and not exceeding 1,200 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3
Over 1,200 and not exceeding 1,300 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	7
Over 1,300 and not exceeding 1,400 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	12
Over 1,400 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	7
Unknown.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	12
Total.....	3	23	19	8	43	16	49	65	19	4	15	2	4	1	5	9	4	48	46	39	256	295	295	295	295	295	295
Aggregate.....	26	18	51	6	65	19	4	6	1	11	52	46	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295

NOTE.—In the columns of "partial loss" in this table are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 26.

TABLE 34.—*Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels and distinguishing age.*

Age.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Not exceeding 3 years.....	1	5	6	13	1	1					10	4	41
Over 3 and not exceeding 7 years.....	9	7	9	11	3						12	6	59
Over 7 and not exceeding 10 years.....	11	1	14	16	5	3					10	10	73
Over 10 and not exceeding 14 years.....	3	1	7	11	2	1					10	7	44
Over 14 and not exceeding 20 years.....	1	3	2	8	5	1					3	7	37
Over 20 and not exceeding 25 years.....		1	2	4					1		1	5	14
Over 25 and not exceeding 30 years.....	1		3	2						2	3		11
Over 30 and not exceeding 35 years.....			1										1
Over 35 and not exceeding 40 years.....													
Over 40 and not exceeding 45 years.....													
Over 45 and not exceeding 50 years.....													
Unknown.....			1		3					1	3	7	15
Total.....	26	18	51	65	19	6			1	11	52	46	295

TABLE 35.—*Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels and distinguishing their cargoes.*

Cargoes.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Ballast.....	8	11	12	13	3	1			1	5	11	12	77
Coal.....	2	1	9	14	2						11	7	46
Copper and copper-ore.....											2	1	3
Corn.....		2	1	3							5	2	13
Flour, cattle, &c.....	1												1
Grain.....			2	1									3
Ice.....		1											1
Iron and iron-ore.....	3	1	6	4		1					1	3	19
Lumber.....	6	2	13	16	6	1				3	10	6	63
Merchandise.....	2		5	2						1		1	11
Provisions.....					1	1					1		3
Railroad-ties and railroad-iron.....				1						1		3	5
Salt.....				1									1
Shingles.....			1	2									3
Staves.....					1								1
Steel butts.....			1										1
Stone, plaster, and building-materials.....	1			3	3	1					1	1	10
Tan-bark.....													1
Wheat.....	2			2	2						5		11
Wood.....	1			3		1					2	2	9
Unknown.....			1		1					1	3	7	13
Total.....	26	18	51	65	19	6			1	11	52	46	295

TABLE 36.—Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels and distinguishing the lakes and adjacent rivers on which they occurred.

Localities.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Lake Superior	1			1		1					2	4	9
Lake Michigan	14	12	23	26	11	3				9	16	20	139
Lake Huron			4	4						1	7	4	20
Lake Saint Clair													4
Lake Erie	6	3	10	12	4	1				1	11	8	56
Lake Ontario	3	1	4	16	2				1		1	1	29
Lake Champlain						1							1
Saint Clair River			2		2						10	1	15
Saint Mary's River												2	2
Detroit River	2	2	2	6							1	3	16
Welland Canal			1									3	4
Total	26	18	51	65	19	6			1	11	52	46	295

TABLE 37.—Summary—Great lakes.

Nature of casualties.	Number of vessels.	Total number of tons.	Laden.	Ballast.	Unknown whether laden or not.	Total loss.	Partial and unknown loss.	Number of passengers.	Number of crew.	Total on board.	Total number of lives lost.
Foundering	12	3,020.31	12			10	2	3	85	88	9
Strandings	57	16,215.20	45	12		18	39	4	462	466	1
Collisions	113	45,957.23	67	33	13	3	110	151	1,050	1,201	2
Other causes	113	31,562.31	81	32		8	105	197	1,002	1,199	37
Total	295	96,755.05	205	77	13	39	*256	355	2,599	2,954	49

* In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 26.

RIVERS.

TABLE 38.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number and value of vessels and cargoes and the amount of loss to same where known.

Months.	Total value of vessels.		Number of vessels value unknown.	Total value of cargoes.		Number of cargoes value unknown.	Loss to vessels.		Number of vessels totally lost, amount unknown.	Number of vessels damaged, amount unknown.	Loss to cargoes.		Number of cargoes totally lost, amount unknown.	Number of cargoes not damaged, or damage unknown.
	Number.	Amount.		Number.	Amount.		Number.	Amount.			Number.	Amount.		
July	6	\$103,200	1	3	\$4,750	2	6	\$52,305	.....	1	3	.....	.....	5
August	18	227,200	1	9	11,485	2	16	19,930	.....	3	4	\$875	.....	7
September	18	515,800	.....	12	111,765	.....	16	34,460	.....	2	6	6,598	.....	6
October	15	391,500	1	10	90,510	1	13	110,975	.....	3	6	52,434	.....	5
November	14	584,400	.....	10	137,190	.....	12	61,310	.....	2	5	46,250	.....	5
December	22	293,000	1	7	57,786	2	22	88,324	.....	1	5	17,626	.....	4
January	25	678,750	.....	6	318,500	.....	24	65,450	.....	1	4	33,900	.....	2
February	12	488,200	2	8	116,400	4	12	47,167	.....	2	6	22,270	.....	6
March	10	228,300	.....	8	60,720	.....	9	61,070	.....	1	4	41,925	.....	4
April	12	110,700	.....	6	23,250	.....	12	39,125	.....	4	4	21,480	.....	2
May	7	39,200	.....	6	62,550	.....	7	39,200	.....	.....	6	62,550	.....	.....
June	10	474,500	.....	8	147,979	1	10	34,200	.....	1	1	3,000	.....	8
Total	169	4,044,750	6	93	1,132,885	12	159	653,516	.....	*16	51	308,908	.....	54

* In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 39.

TABLE 39.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels totally lost, the number damaged, aggregate tonnage of vessels totally lost, the number of passengers and crew, and number of lives lost.

Months.	Number of disasters resulting in total loss to vessels.	Number of disasters resulting in partial damage to vessels.	Whether total or partial loss, unknown.	Number of casualties resulting in no damage to vessels.	Total.	Total tons burden of vessels totally lost.	Total number of crew, including master, &c.	Total number of passengers.	Total number of lives lost.
July	2	4	.....	1	7	320.07	85	.....	.....
August	3	13	1	2	19	212.26	165	50	.....
September	4	12	.....	2	18	536.61	196	316	.....
October	6	7	1	2	16	1,369.07	198	29	10
November	5	7	.....	2	14	1,039.81	161	68	3
December	9	13	1	.....	23	2,361.89	154	25	6
January	11	13	.....	1	25	1,723.92	196	50	.....
February	6	6	2	.....	14	821.29	207	65	.....
March	6	3	.....	1	10	1,499.16	122	120	1
April	5	7	.....	.....	12	718.05	123	152	1
May	7	.....	.....	.....	7	895.39	91	90	22
June	1	9	.....	.....	10	23.76	199	309	7
Total	65	94	5	11	175	11,526.28	1,917	1,334	50

TABLE 40.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels and cargoes insured and uninsured, and the amount of insurance where known.

Months.	Number of vessels and cargoes reported to be insured, and amount of insurance.				Number of vessels and cargoes reported not insured.		Number of vessels and cargoes, whether insured or not unknown.		Vessels in ballast.	
	Vessels.		Cargoes.		Total amount of insurance.	Vessels.	Cargoes.	Vessels.		Cargoes.
	Number.	Amount.	Number.	Amount.						
July	3	\$24, 750	1	\$2, 750	\$26, 750	4	3		1	2
August	5	111, 550	2	3, 730	115, 280	12	5	2	4	2
September	4	55, 000	2	29, 280	84, 280	14	3		2	6
October	9	111, 200	4	64, 000	175, 200	5	5	2		5
November	3	63, 000	4	90, 000	153, 000	11	3		3	4
December	7	44, 500	2	24, 000	68, 500	15	4	1	3	14
January	5	41, 000	3	97, 800	138, 800	20			3	19
February	4	18, 400	5	107, 403	125, 803	7	2	3	5	2
March	6	74, 666	1	1, 400	76, 066	4	4		3	2
April	5	25, 500	2	7, 700	33, 200	7	3		1	6
May	5	19, 500	4	41, 000	60, 500	2	2			1
June	3	215, 000	2	52, 300	267, 300	6	5	1	2	1
Total	59	803, 316	32	521, 363	1, 324, 679	107	44	9	29	70

TABLE 41.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, distinguishing the nature of each casualty.

Months.	Foundered.	Stranded.	Collided.	Snagged.	Fire.	Lightning.	Explosion.	Ice.	Capized.	Miscellaneous.	Unknown.	Total.
July.....		1	2	1	1	2						7
August.....	2	2	8	2	2					2	1	19
September.....	1	2	4	1	2					3		18
October.....		2	8	2	4							16
November.....	2		6	4	1					1		14
December.....	1	1	4	4	3			9	1			23
January.....	1	2	2	2				17		1		25
February.....	1		6	4	1			1				14
March.....		3	2	2	2					1		10
April.....		3	2		3	1		2		1		12
May.....				2	3		1			1		7
June.....		4				2	2			2		10
Total.....	8	25	44	24	22	5	3	29	1	13	1	175

TABLE 42.—Abstract of returns of disasters (excluding collisions) to vessels and cargoes on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels and distinguishing the cause of each disaster.

Class and cause of disaster.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
CLASS 1.—Arising from stress of weather:													
Foundered.....			1					1					2
Stranded.....			3	1		1	2			1		1	9
Capsized.....						1							1
Struck by lightning.....	2									1		2	5
Miscellaneous.....			2									1	3
Total.....	2		6	1		2	2	1		2		4	20
CLASS 2.—Arising from carelessness, inattention, ignorance, &c.:													
Carelessness.....		1	3		1				2			1	8
Error in judgment.....				1						1			2
Total.....		1	3	1	1				2	1		1	10
CLASS 4.—Arising from other causes:													
Thick and foggy weather.....	1				1								2
Low tide.....	1	1											2
Parted cables.....			1							1			2
Sprung a leak.....		2			1	1	1	2			1		9
Snagged.....	2	1	2	3	4	4	2	2			1		19
Fire.....	1	2	2	4	1	3		1	2	3	3		22
Ice.....						9	17	1					29
Boiler exploded.....											1	2	3
Darkness.....							1						1
Machinery broke.....												1	1
Unavoidable.....		1					1						2
Accidental.....							1					1	2
Miscellaneous.....		1	1		1					1	1	1	6
Total.....	3	9	5	6	7	17	21	7	6	7	7	5	100
Unknown.....		1											1
Aggregate.....	5	11	14	8	8	19	23	8	8	10	7	10	131

NOTE.—Class 3 includes disasters arising from defects in vessels or equipments. No casualties are reported in this class.

TABLE 43.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels collided and distinguishing the cause of each collision.

Months.	Stress of weather.	Error of pilot.	Carelessness.	Thick and foggy weather.	Mistaken, drifted, &c.	Crowded channel.	Ice.	"Fault of other vessel."	Unknown.	Total.
July.....								2		2
August.....		2			2	2			2	6
September.....			4							4
October.....		2		2				2	2	6
November.....		4			2					6
December.....								2	2	4
January.....										
February.....		2	2				2			6
March.....	2									2
April.....						2				2
May.....										
June.....										
Total.....	2	10	6	2	4	4	4	6	6	44

TABLE 41.—*Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels and distinguishing their description.*

Description of vessels.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Barks								1					1
Barges				1									1
Brigs						1	2						3
Schooners	5	11	11	4	4	2	6	5	2	7	1	6	64
Ships				1	1								2
Sloops		2		1	1			1	1				7
Steamers	2	6	5	9	9	20	16	7	7	5	6	4	96
Steam-barges				1			1						1
Total	7	19	18	16	14	23	25	14	10	12	7	10	175

TABLE 46.—*Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the tonnage and distinguishing the number of those totally lost and those partially damaged.*

Burden of vessels.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total.		Aggregate.		
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.			
Not exceeding 50 tons	1				1				1		1		1		1		1		1		1		1		15	33	48		
Over 50 and not exceeding 100 tons		2	1	1	1	3	1	1	1	2	1	1	3	1	2	1	1	1	2	1	2	1	1	1	13	11	24		
Over 100 and not exceeding 200 tons					1	2	1	1	1	1	3	1	1	1	4	1	1	1	2	1	2	1	1	1	15	14	29		
Over 200 and not exceeding 300 tons	1	1	1	1	1	2	2	2	2	2	1	2	1	1	1	1	1	2	1	3	2	2	2	2	15	15	23		
Over 300 and not exceeding 400 tons					1	2		1			3	1	1	1	1	1	1	1	2	1	2				13	13	20		
Over 400 and not exceeding 500 tons									1			1	1												2	3	3		
Over 500 and not exceeding 600 tons											1	1								1					1	1	2		
Over 600 and not exceeding 700 tons					1							1	1	1									1	1	1	4	4		
Over 700 and not exceeding 800 tons							1	1	1	1	1	1												2	2	3	3		
Over 800 and not exceeding 900 tons												1														1	1	1	
Over 900 and not exceeding 1,000 tons										1	2															3	3	3	
Over 1,000 and not exceeding 1,100 tons																													
Over 1,100 and not exceeding 1,200 tons																													
Over 1,200 and not exceeding 1,300 tons											1							1								1	1	1	
Over 1,300 and not exceeding 1,400 tons																													
Over 1,400 tons					1								1		1								1	1	1	2	2	2	
Unknown							1			1		1													4	4	4	4	
Total	2	5	3	10	4	14	6	10	5	9	14	11	14	6	8	6	4	5	7	7			1	9	65	116	175		
Aggregate	7	19	18	16	14	23	25	14	10	12	7	10	175																

NOTE.—In the columns of "partial loss" in this table are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 39.

TABLE 47.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels and distinguishing age.

Age.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Not exceeding 3 years.....	2	5	6	3	3	4	6	3	3	2	1	1	39
Over 3 and not exceeding 7 years.....			6	4	5	7	7	5	2	2	3	2	43
Over 7 and not exceeding 10 years.....		2			1	1	3	1					10
Over 10 and not exceeding 14 years.....	1	4	1	4	3	4	5	2	2	3	2	3	35
Over 14 and not exceeding 20 years.....	2	2	1	3	1	2	2		2	1		2	18
Over 20 and not exceeding 25 years.....		2	1		1	1	1			1	1		8
Over 25 and not exceeding 30 years.....	1	1	2			1							5
Over 30 and not exceeding 35 years.....										1			1
Over 35 and not exceeding 40 years.....		1											1
Over 40 and not exceeding 45 years.....			1									1	2
Over 45 and not exceeding 50 years.....						1							1
Unknown.....	1	2		2		2	1	3		1			12
* Total.....	7	19	18	16	14	23	25	14	10	12	7	10	175

TABLE 48.—Abstract of returns* of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels and distinguishing their cargoes.

Cargoes.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Ballast.....	2	8	6	5	4	14	19	2	2	6	1	1	70
Building-materials.....			2	1				1				1	5
Coal.....	1	3	1	1	4	1	1		1	2	1	1	17
Cotton, cotton-seed, &c.....				3	2	1	1	3	2	1			13
Fertilizers.....		1	1					2					4
Grain.....		1	2									1	4
Granite.....			1										1
Hay.....		1											1
Ice.....	1	1											2
Iron and iron-ore.....		1		3			1					3	8
Lime.....	1		1			1							3
Live-stock.....			1						1				2
Lumber.....	1		1		1		1	1				2	7
Merchandise.....		1	2	2	3	2	1	2	1	3	3	1	21
Naval stores.....						1							1
Oysters.....						1		1					2
Produce.....		1							1		1		3
Provisions.....							1						2
Sugar.....						1					1		2
Wood.....	1	1							1				2
Unknown.....	1			1		1		2					5
Total.....	7	19	18	16	14	23	25	14	10	12	7	10	175

TABLE 45.—*Abstract of returns of disasters to foreign vessels on the rivers of the United States during the year ending June 30, 1877, showing nationality and description, and distinguishing those totally lost and those partially damaged.*

TABLE 50.—Summary—Rivers.

Nature of casualties.	Number of vessels.	Total number of tons.	Laden.	Ballast.	Unknown whether laden or not.	Total loss.	Partial and unknown loss.	Number of passengers.	Number of crew.	Total on board.	Number of lives lost.
Foundering.....	8	660.63	3	5	.....	12	6	.....	30	30	.....
Strandings.....	25	5,203.53	19	6	.....	4	21	80	166	246	.....
Vessels collided.....	44	19,964.72	25	14	5	.....	39	473	662	1,135	.....
Other causes.....	98	23,427.14	53	45	.....	54	44	781	1,059	1,840	.....
Total.....	175	49,256.02	100	70	5	65	*110	1,334	1,917	3,251	50

* In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 39.

AT SEA OR IN FOREIGN WATERS.

TABLE 51.—Abstract of returns of disasters to American* vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number and value of vessels and cargoes and amount of loss to same where known.

Months.	Total value of vessels.			Total value of cargoes.			Loss to vessels.			Loss to cargoes.		
	Number.	Amount.	Number of vessels value unknown.	Number.	Amount.	Number of cargoes value unknown.	Number.	Amount.	Number of vessels totally lost, amount unknown.	Number.	Amount.	Number of cargoes totally lost, amount unknown.
July.....	15	\$329,250	5	9	\$79,100	7	15	\$170,930	.....	5	6	\$31,210
August.....	32	1,136,300	1	27	973,157	5	31	320,424	.....	17	181,806	.....
September.....	66	1,197,650	4	53	911,350	9	65	753,090	.....	5	32	678,200
October.....	47	893,700	2	41	1,402,689	6	47	312,000	.....	2	30	237,436
November.....	31	630,000	5	26	677,310	8	30	257,300	1	5	13	95,450
December.....	94	1,586,525	4	74	2,201,246	9	91	515,844	.....	7	42	328,973
January.....	54	1,106,252	5	47	1,881,923	9	51	640,542	.....	8	29	684,433
February.....	39	1,027,200	3	33	1,024,982	6	39	342,742	.....	3	10	113,804
March.....	29	358,500	2	27	574,854	2	29	153,460	.....	2	13	90,453
April.....	55	1,580,466	2	42	970,698	8	52	446,479	.....	5	29	367,366
May.....	26	1,528,000	1	21	1,051,500	4	26	1,124,425	.....	1	9	615,800
June.....	14	133,200	1	12	99,350	2	13	32,116	.....	2	4	45,050
Total.....	502	11,507,043	35	412	11,848,159	75	489	5,069,352	1	77	234	3,469,981

* In the totals of casualties presented in the following 13 tables are included, in order to show the whole number of vessels in collision, 19 foreign vessels which have collided with American vessels at sea or in foreign waters during the year.

† In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 52.

TABLE 52.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number of vessels totally lost, the number damaged, aggregate tonnage of vessels totally lost, number of passengers and crew, and number of lives lost.

Months.	Number of disasters resulting in total loss to vessels.	Number of disasters resulting in partial damage to vessels.	Whether total or partial loss known.	Number of casualties resulting in no damage to vessels.	Total.	Total tons burden of vessels totally lost.	Total number of crew, including master, &c.	Total number of passengers.	Total number of lives lost.
July	5	10	5	.....	20	3,896.88	153	.....	.....
August	9	22	1	1	33	3,947.14	485	152	32
September	30	35	4	1	70	11,165.10	956	13	40
October	23	24	2	.....	49	5,733.81	466	86	47
November	12	18	5	1	36	4,492.59	309	3	13
December	34	57	4	3	93	6,419.72	922	72	137
January	21	30	5	3	59	10,527.19	636	40	113
February	10	29	3	.....	42	4,904.86	394	4	7
March	9	20	2	.....	31	2,550.44	243	6	9
April	23	29	3	2	57	7,208.75	579	67	90
May	8	18	1	.....	27	8,943.37	400	281	6
June	3	10	1	1	15	787.54	181	3	2
Total	187	302	36	12	537	70,577.39	5,724	727	502

TABLE 53.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number of vessels and cargoes insured and uninsured and the amount of insurance where known.

Months.	Number of vessels and cargoes reported to be insured, and amount of insurance.					Number of vessels and cargoes reported not insured.		Number of vessels and cargoes, whether insured or not, unknown.		Vessels in ballast.
	Vessels.		Cargoes.		Total amount of insurance.	Vessels.	Cargoes.	Vessels.	Cargoes.	
	Number.	Amount.	Number.	Amount.						
July	10	\$160,482	4	\$10,400	\$170,882	5	2	5	10	4
August	24	452,655	18	562,225	1,014,880	7	4	2	10	1
September	45	735,300	31	506,210	1,241,510	19	17	6	14	2
October	34	367,232	27	1,311,913	1,679,145	11	8	4	12	2
November	22	341,300	19	566,268	907,568	9	5	5	10	2
December	64	862,708	50	1,583,055	2,445,763	28	13	6	20	15
January	37	445,673	28	1,147,650	1,593,323	16	9	6	19	3
February	28	383,500	27	541,134	924,634	8	.....	6	12	3
March	18	145,430	18	366,023	511,453	10	3	3	8	12
April	34	222,000	24	818,471	1,040,471	20	13	3	13	12
May	19	248,100	12	386,500	634,600	7	7	1	6	2
June	10	50,400	5	38,000	88,400	4	5	1	4	1
Total	345	4,414,780	263	7,837,849	12,252,629	144	86	48	138	50

TABLE 54.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, distinguishing the nature of each casualty.

Nature of casualties.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Foundered	1	5	11	3	8	2	1	2	7	2	4	2	42
Stranded	4	13	9	1	9	11	10	7	9	6	2	86	
Collided	2	2	4	2	8	12	10	4	4	2	4	78	
Damage to hull, rigging, and loss of sails, anchors, &c.	12	22	9	12	34	13	10	6	15	7	3	145	
Lost deck-load	5	1	2	3	3	2	4	1	4	1	1	13	
Sprung a leak	2	5	2	4	3	10	12	4	6	5	4	1	59
Struck sunken wreck			1						1	1			3
Dismasted				2				2	1	1	1		7
Damaged machinery		2	1						1	1			4
Miscellaneous		1	1	4	4	1	3	1		2			17
Abandoned		1	11	2	2	5	3		3				27
Struck by lightning						1				3		2	6
Capized		2	1		1				1	2		1	8
Fire	1	2	2		1	1				1		1	9
Water-logged			2			1			1				4
Ice												1	2
Unknown		2	2			2	1		1				8
Never heard from			1	2		11	1	2		4			21
Total	20	33	70	49	36	98	59	42	31	57	27	15	537

TABLE 55.—Abstract of returns of disasters (excluding collisions) to American vessels at sea or in foreign waters during the year ending June 30, 1877, distinguishing the cause of each casualty.

Class and cause of disaster.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
CLASS 1.—Arising from stress of weather :													
Foundered		1	5	9	2	7	2	1		7			34
Stranded	1	1	11	5	1	2	2	3	3	3			32
Capized		2		1		1				1			5
Damage to hull, rigging, and loss of sails, anchors, &c.		8	15	8	10	26	10	8	4	14	3	2	108
Dismasted			1	1	2	2	2	3	1	1			13
Lost deck-load			1	2	2	3			1	3			12
Miscellaneous		1	2	4	4	1	2	3	1				18
Lost boat			2			3				1			6
Sprung a leak	1	4	1	3	3	7	9	3	4	3	2		40
Abandoned		1	10	2	2	3	1			3			22
Water-logged			3			1			1				5
Struck sunken wreck				1									1
Struck by lightning							1				3	2	6
Total	2	18	51	36	24	56	31	21	15	36	8	4	302
CLASS 2.—Arising from carelessness, inatten- tion, ignorance, &c. :													
Carelessness of officer in charge							1						1
Error in judgment			1					1					2
Carelessness of pilot				1				1					2
Total			1	1			1	2					5
CLASS 3.—Arising from defects of vessels or equipments:													
Error in chronometer								1		1			2
Defective compass											1		1
Defective masts		1									1	1	3
Defective iron-work		1											1
Total		2						1		1	2	1	7
CLASS 4.—Arising from other causes :													
Dragged anchor											1		1
Heavy sea	1	2		1		4	2			1			11
Adverse currents				1		4	2	1		1	1		10

TABLE 55.—Abstract of returns of disasters, &c.—Continued.

Class and cause of disaster.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
CLASS 4.—Continued.													
Thick and foggy weather.....	1						4				1	1	7
Darkness.....		1											2
Lost anchor.....						1	1			1			3
Fire.....	1	2	2		1	1			1	1		1	9
Misstayd.....		1	2	1		1			1	1			7
Mistake in lights.....								1					1
High winds.....	1	2	2		2	2	1	1	1	1	1	1	15
Sprung a leak.....				1		2			3	1	1		8
Accidental.....										1	1		2
Struck rock, reef, &c.....	2						1			1		1	5
Ice.....						2							2
Struck sunken wreck.....									1	1			2
Tides.....	1	1									2		4
Miscellaneous.....						3							3
Tidal wave.....											6		6
Never heard from.....		1	1	2		11	1	1		4			21
Total.....	7	10	7	6	3	31	12	4	7	14	14	5	130
Unknown.....	1	1	1	2	1	3	3	4	5	2	1	1	25
Aggregate.....	10	31	60	45	28	90	47	32	27	53	25	11	459

TABLE 56.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number of vessels collided and distinguishing the cause of each collision.

Months.	Stress of weather.	Thick and foggy weather.	"Fault of other vessel."	Want of lights.	Carelessness.	High winds.	Error in judgment.	Darkness.	Wind and tide.	Dragged anchor.	Parted cable.	Bad management.	Tidal wave.	Unknown.	Total.
July.....		4	2											4	10
August.....			2	2											4
September.....	4		2											4	10
October.....		2			2										4
November.....			2			2								4	8
December.....							2	2							4
January.....		2		2				2	2					6	12
February.....	2		2	2						2					10
March.....													2		4
April.....												2		2	4
May.....													2		2
June.....									2					2	4
Total.....	6	8	10	6	2	2	2	4	4	2	2	2	2	28	78

TABLE 57.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number of vessels and distinguishing their description.

Description of vessels.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Barks.....	5	8	11	9	5	16	9	7	1	4	7	3	85
Barkentines.....									2	1	1		4
Brigs.....	2	1	6	8	7	12	3	4	10	6	1	1	66
Brigantines.....			1					2	1				5
Schooners.....	9	13	38	26	14	59	25	21	13	35	9	10	272
Ships.....	3	8	10		6	7	9	5	1	3	6		58
Steamers.....	1	1	3	5	2		5	1	1	7	2		28
Steamships.....		1		1		2							4
Unknown.....		1	1		2	2	2	2	2	1	1	1	15
Total.....	20	33	70	49	36	98	59	42	31	57	27	15	537

TABLE 53.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the tonnage and distinguishing the number of those totally lost and those partially damaged.

Burden of vessels.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total.		
	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Total loss.	Partial loss.	Aggregate.
Not exceeding 50 tons.....	1	1	1	1	2	4	1	1	1	1	2	6	1	1	1	1	1	1	3	1	2	5	11	4	15		
Over 50 and not exceeding 100 tons.....	1	2	4	11	4	11	5	1	1	1	14	9	3	1	1	1	1	1	2	3	4	5	32	48	70		
Over 100 and not exceeding 200 tons.....	1	1	5	7	5	7	3	1	1	1	4	4	4	1	1	1	1	1	2	3	4	1	32	48	86		
Over 200 and not exceeding 300 tons.....	1	1	1	5	8	5	6	3	3	4	11	4	6	1	1	1	1	1	1	5	7	1	37	54	75		
Over 300 and not exceeding 400 tons.....	1	1	6	7	3	6	2	2	5	3	3	4	4	2	1	1	1	1	6	3	6	4	4	54	83		
Over 400 and not exceeding 500 tons.....	1	1	1	1	1	1	1	1	1	1	1	5	4	3	1	1	1	1	2	2	3	1	1	26	37		
Over 500 and not exceeding 600 tons.....	1	1	1	3	2	1	3	1	1	1	1	4	3	1	1	1	1	1	2	2	1	1	1	11	20		
Over 600 and not exceeding 700 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	18		
Over 700 and not exceeding 800 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	16		
Over 800 and not exceeding 900 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	6		
Over 900 and not exceeding 1,000 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3		
Over 1,000 and not exceeding 1,100 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10		
Over 1,100 and not exceeding 1,200 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10		
Over 1,200 and not exceeding 1,300 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10		
Over 1,300 and not exceeding 1,400 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7		
Over 1,400 tons.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	22		
Unknown.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31		
Total.....	5	15	9	24	30	40	23	26	12	24	34	64	21	34	10	32	9	22	23	34	8	19	3	12	187	350	537
Aggregate.....	20	33	70	40	36	92	50	42	31	57	15	537															

NOTE.—In the columns of "Partial loss," in this table, are included the casualties in which the vessels sustained no damage, for the number of which see appropriate column in Table 52.

TABLE 59.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number of vessels and distinguishing age.

Age.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Not exceeding 3 years.....	4	7	10	5	6	19	3	13	6	12	6	1	92
Over 3 and not exceeding 7 years.....	5	2	8	5	7	20	11	6	5	11	5	3	82
Over 7 and not exceeding 10 years.....	2	5	18	9	5	18	11	6	3	15	2	2	97
Over 10 and not exceeding 14 years.....	3	9	7	12	8	15	10	6	3	9	5	1	93
Over 14 and not exceeding 20 years.....	2	4	7	3	2	12	8	3	4	4	4	4	57
Over 20 and not exceeding 25 years.....	2	2	9	3	5	4	6	3	1	1	2	2	33
Over 25 and not exceeding 30 years.....	1	1	3	5	2	5	3	1					20
Over 30 and not exceeding 35 years.....	1	1		2						2			5
Over 35 and not exceeding 40 years.....	1	1					1		1				4
Over 40 and not exceeding 45 years.....			1							1		1	3
Over 45 and not exceeding 50 years.....			1	1									2
Over 50 years.....			1				1						2
Unknown.....	4	1	4	4	6	5	5	4	3	2	2	1	41
Total.....	20	33	70	49	36	98	59	42	31	57	27	15	537

TABLE 60.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number of vessels and distinguishing their cargoes.

Cargoes.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Almonds, cochineal, &c.....							1						1
Breadstuffs.....				1			1						2
Ballast.....	4	1	8	2	2	15	2	3	2	7	2	1	50
Brimstone.....													1
Coffee.....					1	4		1					5
Chalk.....							1						1
Copper-ore.....			1										1
Cooperage.....													7
Coal.....	1	4	3	5	6	7	1	3	3	5	1		41
Cotton and cotton goods.....		1		2		4	2	2	3				11
Dye-woods.....			3	1		1	1		1	3	2		13
Fish and fishing outfits.....	1	6	9	5	2	11	2	2				4	42
Flour.....					2								2
Fruits.....	1						2	1	2	2	1	1	10
Granite.....			1										1
Guano.....	1	1	2	2		2	1	2			5		16
Grain.....		1		2	1	2	2	1	1			2	12
Glass.....			1										1
Hides, hemp, &c.....							2			1			3
Ice.....		1					1						2
Iron.....			1	3					2				6
Iron-ore.....			1		1	1	2						5
Linseed.....		1	1					1					3
Lime, bricks, hay, &c.....						1				3		1	7
Lumber and timber.....	4	2	8	8	5	9	8	2	4	11	1	1	63
Liquors.....					1								1
Mahogany and fancy woods.....						1							1
Merchandise.....	1	5	6	4	2	12	8	10	2	4	2		56
Oysters.....									1		1		2
Oil, whalebone, and ivory.....		1	12	1		1	1		1		3	2	22
Palm-oil, gums, and confections.....			1			1	1				1		4
Plaster, phosphate, &c.....			2	1		1				2			6
Petroleum.....		1					2						3
Potatoes.....						2	1						3
Powder.....										1			1
Provisions.....		1		3		1	2	1	1		1		10
Rice.....		1			1					1			3
Rosin, tallow, &c.....			1			1							2
Rubber and rubber goods.....					1		1						2
Salt.....	1		1	3	2	7	1		1	1			17
Shingles, staves, slate, &c.....	1					1							2
Shooks.....					1		2	1	1				5
Soda, bone-ash, &c.....		1								1			2
Sugar, molasses, &c.....		3	3	2	4	8	3	4	7	12	4	2	52
Spices.....				1									1
Tobacco, cigars, indigo, &c.....				1							1		2
Unknown.....	5	1	5	2	4	4	4	3	2	2	1	1	34
Total.....	20	33	70	49	36	98	59	42	31	57	27	15	537

TABLE 61.—Summary—At sea and in foreign waters.

Nature of casualties.	Number of vessels.	Total number of tons.	Laden.	Ballast.	Unknown whether laden or not.	Total loss.	Partial and unknown loss.	Number of passengers.	Number of crew.	Total on board.	Total number of lives lost.
Founderingings	42	12,914.18	37	3	2	42	.....	21	341	362	69
Strandings	86	39,252.50	70	15	1	59	27	159	968	1,127	90
Vessels collided	78	28,471.59	33	9	36	8	70	11	528	539	19
Other causes	331	131,544.60	308	23	.....	78	253	536	3,887	4,423	324
Total	537	212,182.87	448	50	39	187	*350	727	5,724	6,451	503

* In this column are included the casualties in which no damage was sustained by the vessels, for the number of which see appropriate column in Table 52.

TABLE 62.—General summary.

Nature of casualties.	Number of vessels.	Aggregate tonnage.	Laden.	Ballast.	Unknown whether laden or not.	Wrecks involving total loss.	Casualties involving partial and unknown damage.	Number of passengers.	Number of crew.	Total on board.	Number of lives lost.
Foundering:											
Atlantic and Gulf coasts.....	41	3,437.78	34	7		29	12	21	165	186	27
Pacific coast.....	12	3,030.31	12					3	85	88	9
Great lakes.....	8	660.63	3	5		10	2	30	30	30	
Rivers.....	42	12,914.18	37		2	42	6	21	311	362	69
At sea or in foreign waters.....											
Total.....	103	20,032.90	86	15	2	83	20	45	621	666	105
Strandings:											
Atlantic and Gulf coasts.....	338	75,292.34	242	86		131	197	565	2,496	3,061	92
Pacific coast.....	92	7,979.13	14	8		13	9	14	122	196	11
Great lakes.....	57	16,215.90	45	12		18	39	4	462	466	1
Rivers.....	25	5,803.53	19	6		4	21	80	108	946	
At sea or in foreign waters.....	86	39,252.50	70	15	1	59	27	159	968	1,127	90
Total.....	518	143,942.70	390	127	1	225	293	822	4,274	5,096	194
Vessels collided:											
Atlantic and Gulf coasts.....	344	107,801.90	179	109	56	22	322	4,196	3,035	7,231	12
Pacific coast.....	20	14,445.02	7	11	2	1	19	133	519	572	
Great lakes.....	113	45,957.23	67	33	13	3	110	151	1,050	1,201	2
Rivers.....	44	19,964.72	25	14	5	5	39	473	692	1,135	2
At sea or in foreign waters.....	78	28,471.59	33	9	36	2	70	11	528	539	19
Total.....	599	216,740.46	311	176	113	39	560	5,184	5,794	10,978	35
Other causes:											
Atlantic and Gulf coasts.....	290	62,637.10	214	76		30	290	1,219	2,469	3,682	73
Pacific coast.....	10	6,044.91	8				10	90	139	249	1
Great lakes.....	113	31,562.31	81	32		8	105	197	1,092	1,199	37
Rivers.....	98	23,427.14	33	45		54	44	781	1,039	1,840	42
At sea or in foreign waters.....	331	131,544.60	308	23		78	253	536	3,887	4,423	354
Total.....	842	361,206.06	664	178		170	672	2,833	8,576	11,399	483
Grand total.....	2,002	641,982.12	1,451	496	115	517	1,545	8,874	19,295	22,139	817

RECAPITULATION.

Atlantic and Gulf coasts.....	1,003	255,319.12	609	276	56	212	701	6,001	8,165	14,166	204
Pacific coast.....	32	28,469.06	29	21	13	14	38	437	860	1,317	12
Great lakes.....	295	96,735.05	205	71	13	39	256	335	2,359	2,894	49
Rivers.....	173	49,256.02	100	70	5	65	110	1,334	1,917	3,251	50
At sea or in foreign waters.....	537	212,182.57	448	50	39	187	330	727	5,724	6,451	502
Total.....	2,062	641,962.12	1,451	496	115	517	1,545	8,874	19,305	22,139	*817
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Atlantic and Gulf coasts.....			Pacific coast.....		Great lakes.....		Rivers.....		At sea or in foreign wa- ters.		Aggregate.
Total value vessels involved.....		\$19,215,296	\$1,731,200		\$4,520,300		\$4,044,750		\$11,507,043		\$40,018,569
Total value cargoes involved.....		7,366,580	489,708		1,525,189		1,132,855		11,846,159		22,363,521
Aggregate.....		25,581,876	2,220,908		6,046,489		5,177,635		23,355,202		62,382,110
<hr/>											
Total insurance on vessels.....		3,728,496	418,800		1,696,535		803,316		4,414,780		11,001,927
Total insurance on cargoes.....		3,134,163	92,000		818,941		521,363		7,837,840		12,403,616
Aggregate.....		6,862,659	510,800		2,514,776		1,324,679		12,252,620		23,405,543
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Total losses to vessels.....		2,889,935	348,779		596,136		653,516		5,069,352		9,487,718
Total losses to cargoes.....		2,803,721	18,400		166,856		308,908		3,469,981		4,857,866
Aggregate.....		3,793,656	367,179		692,992		962,424		8,539,333		14,345,584
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Total tonnage vessels involved.....		255,319.12	28,469.06		96,735.05		40,956.02		912,182.87		641,982.12
Total tonnage vessels lost.....		44,364.51	5,123.04		8,288.73		11,526.28		70,577.58		139,860.95

* In addition to the number of lives lost here reported, 74 lives were lost in cases where no other casualty occurred to the vessel, making the total number of lives lost 891.

UNITED STATES LIFE-SAVING SERVICE.

TABLE 63.—*Wrecks and casualties on and near the coasts and on the rivers of the United States and to American vessels at sea or in foreign waters, involving loss of life, during the year ending June 30, 1877, in four divisions, viz: (1) Foundering; (2) Strandings; (3) Collisions; and (4) Casualties from other causes; showing in each case, when known, the description of the vessel and the cargo, the number of lives lost, and the date and place of disaster, &c.*

(1) FOUNDERINGS.

Date of disaster.	Name of vessel.	Official number.	Description of vessel.	Tonnage.	Port sailed from.	Port bound to.	Whether resulting in total or partial loss.	Nature of cargo.	No. of lives lost.	Place of disaster.
1876.										
Sept. 17	Stonewall.	115421	American schooner	17.51	Beaufort, N. C.	Hertford, N. C.	Total.	Fish.	3	Half mile southwest of Harbor Island light-house, North Carolina.
17	Chas. P. Simmickson.	125109	do	190.90	Richmond, Va.	Philadelphia	Partial.	Railroad-ties.	4	Six miles south of Cape Henlopen.
17	L. & M. Reed.	15068	do	130.90	Philadelphia	Savannah	Total.	Coal.	6	At sea.
17	Robt. F. Stockton.	21493	do	138.38	York River, Va.	Philadelphia	do	Lumber.	5	Chesapeake Bay, near Cape Henry.
Oct. 14	New York.	18119	American steamer	704.66	Parry Sound, Ont.	Tonawanda, N. Y.	do	do	1	Twelve miles off Sand Beach, Mich., on Lake Huron.
19	David Nichols.	6110	American schooner	205.43	Philadelphia	Mobile.	do	Coal.	1	Four miles south of Fowey Rocks, Florida Reef.
20	Katie P. Lunt.	14210	do	201.55	Brunswick.	Saint Jago, Cuba.	do	Lumber.	2	Latitude 28° 12' north, longitude 77° 36' west.
25	Perpetua.	20241	American brigantine.	275.83	Cocos Bay.	San Francisco, Cal.	do	do	4	Ninety-two miles west by south of Cape Gregory, Oregon.
Nov. 6	Carrie Heyer.	4308	American schooner	243.05	Savannah	Galveston.	do	Railroad-iron.	7	At sea.
	John Edward.	75896	American sloop	11.08	Grand Haven, Mich.	Jacksonville, Fla.	Partial.	Vinegar.	1	Five miles north of Saugateck Pier, Lake Michigan.
28	S. F. Gale.	22743	American schooner	235.34	Marblehead, Ohio.	Erie, Pa.	Total.	Stone.	7	Eighteen miles northwest of Cleveland.
30	Starlight.	23631	do	275.88	Brunswick, Ga.	Damariscotta, Me.	do	Hard pine lumber.	7	At sea.
Dec. 4	Elvie Davis.	8306	do	202.05	Philadelphia	Boston.	do	Coal.	6	At sea.
9	Annie Jones.	103054	do	246.38	Brunswick, Ga.	New York.	do	Hard pine lumber.	2	One hundred miles from New York Highlands.
9	Plan.	19522	do	25.26	Baltimore.	Chesapeake Bay.	Partial.	Oysters.	5	Lloyd Gift Farm, Chester River, Maryland.
10	Lancet.	14755	do	56.76	Gloucester, Mass.	George's Bank.	Total.	Ballast.	1	East part of George's Bank.
16	Ellen Francis.	7410	do	55.44	Souris, P. E. Island.	Boston.	do	Potatoes.	5	At sea.
31	Vermillon.	22754	do	85.12	Stonington, Conn.	Port Jefferson, N. Y.	do	Ballast.	3	Long Island Sound.

8	Asow	Norwegian bark...	445.00	Baltimore	Cork	do	Corn	4	Off Back River, Chesapeake Bay.
16	Marietta Tilton...	American schooner	297.65	Newburg, N. Y.	Boston, Mass.	do	Coal	6	Two hundred yards from Cross Rip Light-ship, Nan-tucket Sound.

Total: Vessels, 8; tons, 3,343.65; total losses, 8; lives lost, 35.

(4) CASUALTIES FROM OTHER CAUSES.

Date of disaster.	Name of vessel.	Official number.	Description of vessel.	Tons.	Port sailed from.	Port bound to.	Whether result or partial loss.	Nature of cargo.	Number of lives lost.	Place of disaster.	Nature of casualty.
1876. July											
3	Charlie Morton...	428141	Am. sch. ...	317.09	London, England	Boston, Mass.	No damage.	General merchandise.	1	At sea, latitude 44° 50', longitude 38° 18'.	Lost overboard in a gale.
4	Edward E. Webster	135176	do	98.80	Gloucester, Mass.	Grand Banks, N. F.	do	Fish	1	At sea	Do.
6	Atlas	1292	Am. brig.	423.91	Guantanamo, Cuba	Philadelphia, Pa.	do	Sugar	1	Ten miles ESE. of Cape Henlopen.	Fell from top gallant-yard in heavy squall.
9	Pilgrim	20461	Am. ship.	956.68	New York, N. Y.	San Francisco, Cal.	do	General merchandise.	1	Off Cape Horn	Lost overboard.
9	Saint Clair	23109	Am. str.	236.48	Ontonagon, Mich.	Eagle River, Mich.	Total	Flour, &c.	27	Five miles N. of Fourteen-mile Point, Lake Superior.	Burned.
11	Helena	95376	Am. sch. ...	863.93	Marquette, Mich.	Ashabua, Ohio.	No damage.	Iron ore	1	Five miles WNW. of Point aux Barques light, Lake Huron.	Fell overboard while working on side of vessel.
11	Sadie	23825	Am. bark	514.17	Boston, Mass.	Queentown, Ireland	do	Grain	1	At sea, latitude 42° N., longitude 53° W.	Lost overboard in a gale.
14	Melissa J. Tyler...	17902	Am. sch. ...	23.31	Hooper's Straits, Md.	Baltimore, Md.	do	Wood and grain	1	Between James and Travers Points, Chesapeake Bay.	Fell overboard in endeavoring to get into yawl-boat.
20	Mohawk	90768	Am. yacht.	201.80	New York Harbor, N. Y.	do	Partial	do	5	Off Staten Island, New York Harbor.	Capized.
31	W. H. Marcy	80528	Am. ship.	1607.00	Liverpool, England	New York, N. Y.	No damage.	General merchandise.	1	Channel, latitude 50° 41', longitude 97° 27'.	Washed overboard in a heavy sea.
Aug. 1	Eleanora	135015	Am. str.	988.29	Portland, Me.	do	do	do	2	Off Newport, R. I.	Fell overboard.
15	Callao	5508	Am. brig.	446.21	Sligo, Ireland	Philadelphia	do	Ballast	1	Sligo, Ireland	Do.
20	Colon	195089	Am. str.	2,685.75	New York, N. Y.	Aspinwall, Cen. Am.	Partial	Miscellaneous	2	Latitude 28° 17' N., longitude 74° 4' W.	Accident to machinery.
21	Conqueror	195270	Am. ship.	1,621.50	do	San Francisco, Cal.	No damage.	General merchandise.	2	Off Cape Horn	Washed overboard in a heavy gale.

TABLE 63.—*Wrecks and casualties on and near the coasts and on the rivers of the United States, &c.*—Continued.

(4) CASUALTIES FROM OTHER CAUSES—Continued.

Date of disaster.	Name of vessel.	Official number.	Description of vessel.	Tons.	Port sailed from.	Port bound to.	Whether resulting in total or partial loss.	Nature of cargo.	Number of lives lost.	Place of disaster.	Nature of casualty.
1876.											
Aug. 26	Continental	125360	Am. ship.	1,712.00	New York, N. Y.	San Francisco, Cal.	No damage.	General merchandise.	1	Off Cape Horn.	Fell from mainyard to deck.
27	Ada P. Gould	105533	Am. sch.	126.86	do.	Rio Grande	Total.	do.	2	Latitude 39°, longitude 54°, off Bermuda.	Washed off topmast.
28	Petrel	19764	do.	61.09	New Bedford, Mass.	Cruising	Partial.	Oil	2	Latitude 35° N., longitude 31° W.	Washed overboard.
30	Ned White	16795	Am. brig.	550.57	Manila, E. I.	New York, N. Y.	do.	Sugar	1	Off Cape of Good Hope	After-house washed away.
Sept. 1	Radiant	110164	Am. ship.	1,607.86	Calcutta, India	do.	Total.	Oil &c.	31	At sea.	Unknown.
1	Aquidneck	58	Am. bark.	342.80	Rio de Janeiro, Brazil.	Baltimore, Md.	No damage.	Coffee.	1	At sea, latitude 25° 37' S., longitude 39° 19' W.	Fell overboard setting mainmast.
2	Sarah and Sophia	22046	Am. sch.	34.41	Baltimore, Md.	Chester River, Md.	do.	Ballast.	1	Two miles W. of Love Point, Chesapeake Bay.	Knocked overboard by fœresail.
3	Emma A. Mayes	8722	do.	423.32	Port Huron, Mich.	Chicago, Ill.	do.	Lumber	1	Six miles N. W. of Preeque Isle, Lake Huron.	Fell from cross-trees.
5	Camilla	5323	Am. bark.	328.38	Honolulu, Sandwich Islands.	Arctic Ocean	Total.	Oil, &c.	1	Arctic Ocean, off Point Barrow.	Abandoned; left on board sick.
5	Saint George	28609	Am. ship.	392.74	do.	do.	do.	do.	3	do.	Abandoned; frozen to death.
12	Silverheels	115075	Am. sch.	117.98	Mutton Bay, Labrador.	do.	No damage.	Herring.	1	Mutton Bay, Labrador	Capsize of boat in a squall.
17	John L. Merrill	13733	do.	245.72	Ponce, Porto Rico.	New York, N. Y.	Partial.	Sugar	1	Off Hatteras, N. C.	Washed off jib-boom.
17	David Owen	6052	Am. brig.	383.11	Cienfuegos, Cuba.	do.	do.	do.	1	Off Cape Henry, Va.	Deck swept in a hurricane.
17	Abby Watson	314	do.	213.87	Fernandina, Fla.	do.	do.	Lumber	1	At sea, latitude 31° N., longitude 76° W.	Washed overboard by a sea.
18	Warren B. Hopkins	26092	Am. sch.	80.77	St. Pierre, Miguel'n	Grand Banks, N. F.	do.	Fish and oil.	1	Grand Banks, N. F.	Washed overboard.
27	Florence I. Lockwood.	9677	do.	299.07	Alexandria, Va.	Providence, R. I.	No damage.	Coal.	1	Between Montank Point and Block Island.	Knocked overboard by jib-sheet.
27	Epes Tarr	8972	do.	70.06	Gloucester, Mass.	Grand Banks, N. F.	Partial.	Fish	1	Grand Banks, N. F.	Drowned while attending his trawl.

29	Eva May	8194	do	265.13	Liverpool, England	Demerara, Br. Guin	No dam-	Coal and brick	1	Off Bay of Biscay	Lost overboard in a hurricane.
—	Addie L. Bird	10534	do	78.40	Montego Bay, Jamaica	New York, N. Y.	Total	Sugar, &c.	8	At sea	Never heard from.
Oct	Walter M. Felt	80222	do	67.46	Gloucester, Mass.	Grand Banks, N. F.	do	Fish	12	Grand Banks, N. F.	Waterlogged.
1	Ella	8572	Am. bark	654.61	Glasgow, Scotland	Boston, Mass.	No dam-	Ballast	10	English Channel	Lost overboard.
6	Chas. P. Thompson	Am. sch.	Am. sch.	73.00	Saint John's, N. B.	Fishing	do	do	1	do	Fell from dory.
10	Maggie Hunter	Unk.	Can. sch.	168.94	Oswego, N. Y.	Toronto, Ontario	Total	Coal	8	Near Oswego, N. Y.	Never heard from.
10	Southern Belle	115496	Am. str.	738.63	Bayou Sara, La.	New Orleans, La.	do	Cotton, &c.	10	Twinnelabou, 22 Plaquemine, La., Mississippi River.	Burned.
13	Matamoras No. 2	90021	do	240.55	Lynchburg, Tex.	Galveston, Tex.	do	Ballast	3	Galveston Bay 1 mile S. of Morgan Point.	Do.
16	Mary B. Reeves	17299	Am. sch.	99.40	Labrador, British America	Boston, Mass.	do	Herring	5	N. W. Bar, Sable Island, Nova Scotia.	Drowned.
19	Mollie Emma	90554	do	100.39	Shildoboro', Miss.	Matanzas, Cuba	Partial	Lumber	6	Thirty miles E. of Key West, Fla.	Capsized.
24	Early Bird	8989	do	150.96	St. Domingo, W. I.	Boston, Mass.	Total	Wood	3	Latitude 31° 20' N., longitude 71° 44' W.	Abandoned.
26	Reporter	21719	do	37.78	Baltimore, Md.	Chesapeake Bay	No dam-	Ballast	1	Off Kent Island	Fell overboard.
26	Everett Gray	8751	Am. bark	592.46	Boston, Mass.	Gloucester, Engl'd	Age.	Corn	11	At sea	Never heard from.
27	Isla	12144	Am. brig.	337.94	Gambia, Africa	Gloucester, Engl'd	No dam-	do	1	do	Lost overboard.
28	Ontario	19094	Am. sch.	94.46	Boston, Mass.	Calais, Me.	do	Ballast	1	Dear Isle, Me.	Fell overboard.
30	George Murray	83305	Am. sch.	790.45	Buffalo, N. Y.	Chicago, Ill.	do	Coal	1	Two miles N. of Newport, Mich.	Do.
Nov.	Janet Middleton	75181	Am. sch.	66.43	Gloucester, Mass.	Fishing	Total	Ballast	12	At sea	Never heard from.
2	E. P. Church	7545	Am. sch.	43.66	Seconnett River, R. I.	do	do	do	1	Between Seconnett and Newport, R. I.	Fell overboard.
4	Agenor	1882	Am. ship	1,457.93	Liverpool, England	Boston, Mass.	do	Coffee	1	At sea	Do.
7	Henry B. Cleaves	95302	Am. brig.	349.84	Rio de Janeiro, Brazil	New York, N. Y.	do	do	1	Off Cape Hatteras, N. C.	Fell overboard from rigging.
9	City of Chicago	4333	Am. sch.	327.17	Alpena, Mich.	Chicago, Ill.	do	Lumber	1	Lake Michigan	Fell overboard.
12	Alida	105425	Am. ship	1,671.68	Antwerp, Belgium	Callao, Peru	Age.	Ballast	1	Land's End, English Channel.	Fell overboard while reefing topsail.
17	Hale	95028	Am. str.	134.24	Mobile, Ala.	Demopolis, Ala.	Total	Bagging	1	Thirty-one-mile Bluff, Mobile River, Ala.	Sunk.
19	John J. Marsh	75527	Am. bark	410.10	Cadiz, Spain	Portland, Me.	No dam-	Salt	1	Off Cape St. Vincent, Portugal.	Knocked overboard in a gale.
Dec.	General Canby	85414	Am. str.	76.09	South Bend, Wash.	Astoria, Oreg.	Partial	Furniture	1	South Channel, Columbia River Bar.	On beam ends in breakers.
5	Francis Perkins	9391	Am. sch.	52.44	New York, N. Y.	do	No dam-	Ballast	1	Off Shinnecock Light-house, Long Island.	Fell from main boom while reefing sails.
9	Laura	14510	do	37.56	Baltimore, Md.	Annapolis, Md.	Partial	do	9	Annapolis Roads, Chesapeake Bay.	Capsized.
9	Mary J. Ward	90228	do	191.66	Brunswick, Ga.	New York, N. Y.	Total	Lumber	1	Latitude 39° 25' N., longitude 70° W.	Washed overboard.
9	Ortolan	19081	Am. brig.	301.33	Havana, Cuba	do	Partial	Sugar	1	At sea, latitude 38° 2' N., longitude 74° 25' W.	Carried away main-boom, &c.
9	P. W. Blanchard	150072	Am. ship	1,582.24	New York, N. Y.	San Francisco, Cal.	do	General	1	Off Cape Horn	Fell overboard.

TABLE 63.—*Wrecks and casualties on and near the coasts and on the rivers of the United States, &c.—Continued.*

(4) CASUALTIES FROM OTHER CAUSES—Continued.

Date of disaster.	Name of vessel.	Official number.	Description of vessel.	Tons.	Port sailed from.	Port bound to.	Whether result of partial loss.	Nature of cargo.	Number of lives lost.	Place of disaster.	Nature of casualty.
1876.											
Dec. 9	Ruth Groves	21942	Am. sch.	65.52	Gloucester, Mass.	Le Have, N. S.	Partial	Fish	2	On passage	Capelized.
	James A. Crocker	13763	do	101.89	New York, N. Y.	Providence, R. I.	Total	Coal	4	Off Plum Island, Long Island Sound.	Do.
10	Clara Jane	5011	do	44.30	Saint Peters	Plymouth	do	Ballast	1	Twenty miles S.E. of Little Hope Isl'd, N. S.	Loss of sails, spars, &c.
11	Trott King	24884	do	151.00	St. Domingo, Hayti	Boston, Mass.	do	Logwood	1	At sea, latitude 29° 32', longitude 71° 20'.	Abandoned.
12	Ocean Pearl	19416	Am. bark	453.96	Cardiff, England	Havana, Cuba	No damage.	Coal	1	At sea.	Fell overboard.
13	Minisceongo	90099	Am. str.	53.93	Charleston, S. C.		Total	Ballast	4	Ashley River, off Charleston.	Explosion of boiler.
14	Homer	95399	do	91.25	Alexandria, La.	Shreveport, La.	do	Sugar	4	Payne's Landing, Red River, La.	Snagged and sunk.
15	Ann M.	683	Am. sch.	49.64	Verplancks, N. Y.	New York, N. Y.	Partial	Limestone	2	Riverdale, Hudson River, 15 miles from New York.	Capelized.
15	Addie Todd	105446	do	154.92	Syrinam, S. A.	Boston, Mass.	do	Salt	1	At sea.	Lost overboard.
16	Tarifa	24912	Am. brig	533.06	Trieste, Austria	Palermo, Sicily	No damage.	Ballast	3	Gulf of Taranto	Knocked overboard.
16	Orie M. Remington	19233	Am. sch.	133.63	New York, N. Y.	West Indies	Partial	General mer. chandise.	1	Off Cape Henry, at sea.	Washed overboard.
18	Isaac Webb	12213	Am. ship	1,497.47	do	Liverpool, England	do	do	3	At sea, longitude 34°, latitude 45°.	Lost sails, &c.
20	Jacob G. Neade	75068	Am. str.	66.37	Brooklyn, N. Y.	Hoboken, N. J.	Total	Ballast	3	Ten miles to eastward of Sandy Hook light-ship, New Jersey.	Explosion of boiler.
27	General Miller	85358	Am. sch.	108.75	San Francisco, Cal.	Oonaska	No damage.	General mer. chandise.	1	Latitude 51° 36' N., longitude 162° 24' W.	Washed overboard.
28	Harvey Mills	95445	Am. ship	2,186.65	Port Royal, S. C.	Liverpool, England	Partial	Cotton	2	Four miles below Port Royal, Broad River, S. C.	Fire, suffocation.
29	A. H. Lennox	1082	Am. sch.	72.51	Portland, Me.	Fishing-criuse	do	Fish	1	Off Cape Elizabeth, Me.	Washed overboard.
29	Port Smith	20343	Am. str.	10.16	Baltimore, Md.		Total	Ballast	2	Harbor of Baltimore	Explosion of boiler.

30	Cornelia A. Miles..	5777	Am. sch.	36. 78	Crisfield, Md.	Dredging-grounds, Chesapeake Bay.	No dam- age.	Oysters	1	One-half mile from mouth of Patuxent River, Maryland. Latitude 33° 37' S., longitude 8° 40'.	Knocked overboard by jib.
31	George and Susan.	10362	Am. bark.	343. 20	St. Helena	Whaling-grounds.	do.	Oil	1	At sea.	Killed by a whale.
—	Alberta	105448	Am. brig.	361. 79	New York, N. Y. ..	Penarth, Wales ..	Total	Wheat	8	Never heard from.	Do.
—	Caroline E. Kelly ..	5326	do.	181. 49	Le Havre, N. S. ..	Hayti, W. I.	do.	Lumber	11	Missing.	Do.
—	M. B. Jerauld	16560	Am. sch.	70. 34	Gloucester, Mass. ..	Fishing	do.	Ballast	10	Do.	Do.
—	J. F. Huntress	75385	do.	62. 63	do.	do.	do.	do.	9	Do.	Do.
—	J. F. Allen	75040	do.	45. 25	do.	do.	do.	do.	10	Do.	Do.
—	Robert Emmett	21941	do.	63. 00	do.	do.	do.	do.	12	Do.	Do.
—	John S. Tyler	75038	do.	76. 76	do.	do.	do.	do.	11	Do.	Do.
—	Wm. T. Merchant ..	29312	do.	60. 37	do.	do.	do.	do.	9	Do.	Do.
—	Howard Steele	95153	do.	55. 21	do.	do.	do.	do.	10	Do.	Do.
—	Wm. W. Woodbury ..	80204	do.	65. 27	do.	do.	do.	do.	5	Never heard from.	Do.
—	D. E. Woodbury	6660	do.	112. 57	Hoboken N. J.	Boston, Mass	do.	Coal	11	Missing.	Do.
—	Albert Treat	851	do.	65. 71	Gloucester, Mass. ..	Fishing	do.	Ballast	1	At sea, latitude 34°, longitude 72°.	Fell overboard.
1877.	Sarah E. Allen	115465	do.	104. 86	New York, N. Y. ..	Hayti, W. I.	No dam- age.	Lumber	1	Ten miles southeast from Cape Cod.	Do.
2	Ariadne	105434	do.	377. 79	Vineyard Haven, Mass.	Boston, Mass	do.	Salt	1	Off Cape Horn.	Fell from aloft.
2	Cape Horn Pigeon ..	4614	Am. bark.	212. 02	New Bedford, Mass.	Whaling voyage New York, N. Y.	do.	Sperm oil	1	Bay of Biscay.	Do.
4	John O. Baker	13751	Am. ship ..	110. 63	London	New York, N. Y.	Partial.	Chalk	1	Straits of Gibraltar.	Do.
10	Ulrich B. Risk	25195	Am. sch.	513. 19	Palomares, Spain ..	Baltimore, Md.	do.	Iron-ore	1	Twenty-one miles west of Point Barrow, Cal.	Knocked overboard by main boom.
13	Western Home	60421	do.	135. 12	San Francisco, Cal.	Navarro, Cal.	No dam- age.	Ballast	1	Latitude 33° 49' N., longitude 123° 39' W.	Washed overboard.
16	Cordelia	125180	Am. str.	59. 52	Coquille River, Oregon.	San Francisco, Cal.	do.	Lumber	3	Aracaja Bar	Lost overboard.
17	Lincoln	15884	Am. brig.	209. 67	Liverpool	Aracaja Bar	do.	Cotton and sugar.	1	Jeffries Banks, Mo.	Capsized.
24	Jennie H. Gilbert ..	75907	Am. sch.	94. 76	Portland, Me.	Jeffries Banks ..	Partial.	Fish	4	Latitude 43° 33' N., longitude 45° 10' W.	Frozen.
24	Island Belle	12654	do.	163. 61	St. John's, N. B. ..	Boston, Mass	Total.	do.	1	At sea.	Fell from fore royal-yard.
27	St. John Smith	115227	Am. ship ..	2. 220. 00	Liverpool, England	San Francisco, Cal.	No dam- age.	Coal and iron ..	1	Navarro, California ..	Capsizing of ship's boat.
Feb. 3	Ino	12269	Am. sch.	97. 83	San Francisco, Cal.	Navarro River, Cal.	do.	Ballast	7	Chesapeake Bay.	Missing.
12	John J. H. Coulbourn.	75819	do.	23. 14	Baltimore, Md.	Onancock, Va.	Partial.	do.	1	Off Cape Horn	Washed overboard.
—	Thomas Fitch	24522	do.	81. 16	San Andreas, U. S. of Colombia.	Baltimore, Md.	Total.	do.	7	At sea.	Unknown.
Mar. 1	Valiant	25902	Am. ship ..	1, 572. 84	New York, N. Y. ..	San Francisco, Cal.	No dam- age.	Assorted	7	At sea.	Fell from yard.
2	Jesse S. Clark	13885	Am. sch.	245. 70	Montego Bay, Jamaica.	New York, N. Y. ..	Total.	Logwood	1	Latitude 29° 37' N., longitude 70° 24' W.	Capsized.
3	Caroline Eddy	4073	Am. brig.	337. 55	Mezzana, Sicily	Boston, Mass	No dam- age.	Fruit	1	do.	do.
6	Mary E. Russell	90817	Am. bark.	575. 49	Probolingo, Java ..	do.	Partial.	Sugar	1	do.	do.

TABLE 63.—*Wrecks and casualties on and near the coasts and on the rivers of the United States, &c.—Continued.*

(4) CASUALTIES FROM OTHER CAUSES—Continued.

Date of disaster.	Name of vessel.	Official number.	Description of vessel.	Tons.	Port sailed from.	Port bound to.	Whether resulting in total or partial loss.	Nature of cargo.	Number of lives lost.	Place of disaster.	Nature of casualty.
1877. Mar. 7	A. J. Collins.....	105176	Am. sch.....	53.21	Baltimore, Md.....	Nassawadox Creek, Va.....	No damage.	Guano, &c.....	1	Fleet's Point, mouth of Wicomicton River, Va.	Drowned.
9	James A. Brown.....	128330	do.....	172.78	Navassa, W. I.....	Wilmington, N. C.....	do.	Coals.....	1	At sea.....	Fell overboard.
9	Lizabell.....	15191	Am. brig.....	234.08	Cay Francesa, Cuba.....	Portland, Me.....	Partial.	Molasses.....	1	Off Hatteras, N. C.....	Washed overboard.
11	Gelina.....	125162	Am. bark.....	477.42	Portland.....	Buenos Ayres, S. A.....	No damage.	Lumber.....	1	Latitude 37° 11' S., Longitude 30° 29' W.	Fell off jib-boom.
15	Gov. Garland.....	85453	Am. str.....	396.04	Pine Bluff, Ark.....	Memphis, Tenn.....	Total.	Cotton, &c.....	1	Sandy Bayou, Arkansas River.....	Burned.
22	A'root.....	105501	Am. brig.....	401.23	Sagua la Grande, Cuba.....	Boston, Mass.....	Partial.	Sugar.....	1	Cape Cod, bearing NW. by W. 18 miles.	Loss of masts and rigging.
Apr. 3	Cornelia A. Miles.....	5777	Am. sch.....	36.76	Magdaly River, Md.....	Baltimore, Md.....	No damage.	Oysters.....	1	Off North Point, Md., Chesapeake Bay.	Knocked overboard by main-sail.
3	Fred. Gerrig, jr.....	9905	do.....	70.88	.....	Fishing cruise.....	do.	Fish.....	2	On the Banks.....	Drowned while visiting their trawls.
5	Hattie E. Smith.....	95921	do.....	100.00	Baracoa, Cuba.....	New York, N. Y.....	Partial.	Fruit.....	1	At sea.....	Carried away jib.
9	Maggie.....	90013	Am. str.....	513.04	Snow Hill, Md.....	Baltimore, Md.....	do.	General merchandise.	1	Forty miles below Snow Hill, Pocomoke River, Md.....	Boat capsized.
10	Clara E. Bergen.....	123287	Am. sch.....	381.96	Savannah, Ga.....	New York, N. Y.....	do.	Lumber.....	2	Cape Hatteras, N. C., latitude 35° 40', lon- gitude 75°.	Loss of sails, spars, &c.
13	Charlie H. Dow.....	125032	do.....	259.58	Fernandina, Fla.....	do.....	No damage.	do.....	1	Fifteen miles ESE from Body Island, N. C.	Lost overboard.
13	Cortes.....	4256	Am. str.....	1,346.18	Halifax, N. S.....	St. John's, N. B.....	do.	General merchandise.	1	Off Cape Canse, N. S....	Washed overboard.
13	Allee Lee.....	273	Am. brig.....	297.20	Cabarten, Cuba.....	New York, N. Y.....	Partial.	Sugar.....	1	Off Cape Lookout, N. C	Loss of sails, rigging, &c.
13	Samuel H. Crawford.....	115390	Am. sch.....	342.79	Cardenas, Cuba.....	Philadelphia, Pa.....	do.	Molasses.....	1	Hampton Roads, Va.....	Knocked overboard by main-sail.
13	Charles E. Elmer.....	4974	do.....	272.21	Philadelphia, Pa.....	Havana, Cuba.....	Total.	Coal.....	7	Off Topsail Inlet, N. C.	Went to pieces in gale.
13	Leo.....	14947	Am. str.....	923.89	Savannah, Ga.....	Nassau, N. P., Bahamas.	do.	Assorted.....	23	Eighty-three miles S. of Tybee Light, Ga.	Burned.
14	Abbie.....	1313	Am. sch.....	285.63	Matanzas, Cuba.....	Hampton Roads, Va.	do.	Molasses.....	1	Off Cape Fear, N. C., latitude 33° 30', longitude 78° 50'.	Abandoned.

14	O. D. Witherell.....	19400	do	631.17	Baltimore, Md.....	Boston, Mass.....	Partial..	Coal.....	1	Capes of Virginia.....	Lost overboard.
14	Abby Watson.....	314	Am. brig.	213.87	New Haven, Conn.....	Brunswick, Ga.....	Total..	Ballast.....	7	Hatteras Shoals.....	Never heard from.
14	Abby L. Dow.....	1945	Am. sch.	347.50	Philadelphia, Pa.....	Matanzas, Cuba.....	Partial..	Coal.....	1	N.E. of Cape Hatteras, latitude 36°, longitude 74°	Washed overboard.
19	David A. Preston.....	6869	Am. bark.	531.01	Boston, Mass.....	Martinez, W. I.....	No dam- age.	Ice.....	1	At sea, latitude 39° 59', longitude 81° 4'	Fell overboard.
20	Eddie Pearce.....	8639	Am. sch.	95.84	Port Antonio, Ja.....	Philadelphia, Pa.....	Partial..	Bananas.....	1	Off Cape Hatteras, N. C.	Washed overboard.
27	Morning Star.....	90830	do	99.32	San Francisco, Cal.....	Salmon Creek.....	Total..	Hay.....	1	Fifty-two miles SW. of Point Reyes, Cal.	Capsized.
27	Velocipede.....	25348	do	10.12	Recine, Wis.....	Muskegon.....	do	Ballast.....	2	Lake Michigan.....	Unknown.
—	Josie.....	19448	Am. brig.	390.92	Port Jefferson.....	Kingston, Jamaica.....	do	Coal.....	7	At sea.....	Never heard from.
—	G. P. Pomeroy.....	82324	Am. sch.	337.40	Brunswick, Ga.....	Bath, Me.....	do	Lumber.....	8	do.....	Do.
—	Perl.....	20149	Am. brig.	250.67	Havana, Cuba.....	Baltimore, Md.....	do	Molasses.....	14	do.....	Do.
—	Paramount.....	19600	Am. bark.	526.89	Naraya Island, W. I.....	do.....	do	Phosphate.....	13	do.....	Explosion.
May 7	Walton.....	26882	Am. str.	40.56	Mississippi River.....	New Orleans, La.....	Total..	Onions, &c.....	5	Twenty miles below New Orleans.....	Loss of deck-house, &c.
10	Courser.....	4190	Am. bark.	495.20	Auckland, N. Z.....	New York, N. Y.....	Partial..	Gum, &c.....	7	Latitude 50° S, long- itude 108° 31' W.	Snagged.
11	Emma.....	135105	Am. str.	182.62	New Orleans, La.....	Franklin Rice Mills.....	Total..	Provisions, &c.....	2	New Orleans.....	Sunk.
14	Sandy No. 2.....	115277	do	266.76	Washington, La.....	New Orleans, La.....	do	Cotton, &c.....	1	Bell's Point, Mississippi River, 4 miles above Baton Rouge, La.	Falling from mast-head.
21	Jas. E. Baylis.....	75686	Am. sch.	394.56	New York, N. Y.....	Philadelphia, Pa.....	No dam- age.	Ballast.....	1	Off Absecon, N. J.....	Lost overboard.
June 5	Launcester.....	14538	Am. str.	280.40	Baltimore, Md.....	Hayre de Grace, Md.....	General mer- chandise.	General mer- chandise.	2	Between North Point and Hayre de Grace.	Capsized in a squall.
9	Swiss Boy.....	Am. yacht	do	do	Cleveland, Ohio.....	do.....	do	Ballast.....	1	Fifteen miles SW. of Flattery Rocks, off Washington Terri- tory.	Capsized.
13	Cambridge.....	5495	Am. bark.	255.51	Port Ludlow.....	San Francisco, Cal.....	Total..	Lumber.....	1	Forty miles E. of Cape Hatteras, N. C.	Fell from mast-head.
15	Cecile.....	125103	Am. sch.	173.84	Baracoa, Cuba.....	New York, N. Y.....	Partial..	Fruit.....	1	Seven miles E. of Wind Mill Point, Lake Saint Clair.	Fell overboard from back-ropes.
16	C. H. Johnson.....	5833	do	332.47	Cleveland, Ohio.....	Milwaukee, Wis.....	No dam- age.	Coal.....	3	Off Long Point, seven miles E. of Rigoleta, Lake Borgne, La.	Burned.
17	Lizzie.....	14926	Am. str.	205.85	New Orleans, La.....	Pensacola, Fla.....	Total..	Hay, &c.....	1	Off Fort Ross, Cal.....	Fell overboard at- tempting to get in- to boat.
20	Mary Zephyr.....	17418	Am. sch.	49.35	San Francisco, Cal.....	Fort Ross, Cal.....	No dam- age.	Wood.....	1	Cacheti, Cal.....	Boat capsized.
20	Onward.....	19334	do	35.20	San Diego, Cal.....	San Francisco, Cal.....	do	Copper ore.....	1	Seven miles NW. of Point Reyes, Cal.	Fell overboard.
21	John and Samuel.....	13557	do	74.05	Albion River.....	do.....	do	Lumber.....	3	Roko Bay, south end of.	Boat capsized.
24	Flying Mist.....	9248	do	57.24	San Francisco, Cal.....	North Pacific Ocean.....	do	Otter skins.....	2	At dock, Weir Village, Taunton River, Mass.	Killed wheeling coal on board.
26	Herbert.....	11971	Am. str.	28.76	Somerset.....	Taunton, Mass.....	Total..	Ballast.....			

TABLE 63.—*Wrecks and casualties on and near the coasts and on the rivers of the United States—Continued.*
(4) CASUALTIES FROM OTHER CAUSES—Continued.

Date of disaster.	Name of vessel.	Official number.	Description of vessel.	Tons.	Port sailed from.	Port bound to.	Whether resulting in total or partial loss.	Nature of cargo.	Number of lives lost.	Place of disaster.	Nature of casualty.
1877. June 30	Redwing	21941	Am. str. ...	670.43	Saint Paul, Minn..	Saint Louis, Mo. ...	Partial..	Lumber	5	Two and one-half miles above Dallas, Ill., Mississippi River.	Scalded.
.....	E. B. Phillips	7431	Am. sch. ...	66.91	Gloucester, Mass..	Grand Banks	No damage.	Ballast	2	Off Banks, latitude 49° 30' N., longitude 69° 10' W.	Lost while attending trawl.

Total: Vessels, 138; tons, 59,232.40; total losses, 56; partial losses, 39; no damage, 63; lives lost, 557.

TABLE 64.—*Wrecks and casualties on or near the coasts and on the rivers of the United States, &c., during the year ending June 30, 1877, involving loss of life.*

Nature of casualties.	Number of vessels.	Tonnage.	Total loss.	Partial loss.	No damage to vessel.	Number of lives lost.
Foundering.....	26	5,329.71	23	3	.....	105
Strandings.....	26	15,246.06	22	4	.....	194
Vessels collided.....	8	3,343.65	8	.....	.....	35
Other causes.....	158	58,232.40	56	39	63	557
Total.....	218	82,151.82	109	46	63	891

NOTE.—In this table are included 74 lives lost in cases where no damage was sustained by the vessel or cargo meeting with such casualty; for example, seamen lost overboard in gales; falling from masts and yards; knocked overboard by jib; drowned by upsetting of small-boats, &c. In these cases the nature of the cargo is not stated.

TABLE 65.—*List of places on the coasts of the United States where vessels have stranded during the last ten years.*

ATLANTIC COAST.

Name of place.	Fiscal year ending June 30—										Total.
	1862.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Abasco, N. J.....	1	.....	1	.....	.....	3	2	.....	7
Addison, Me.....	2	.....	.....	.....	.....	.....	.....	1	.....	3
Ajax Reef, Fla.....	1	.....	.....	.....	1
Alden Rock, Portland, Me.....	1	.....	1
Allen Island, Penobscot Bay.....	1	.....	.....	1
Amazeen Island, N. H.....	1	.....	.....	.....	1
American Shoal Reef, Fla.....	1	.....	.....	.....	1
Aransas, Tex.....	2	1	1	.....	1	.....	1	1	7
Assawaman Inlet, Va.....	1	.....	.....	.....	.....	1
Asylum Bridge, R. I.....	2	.....	.....	.....	.....	.....	.....	.....	2
Atlantic City, N. J.....	1	.....	.....	.....	.....	.....	.....	.....	1	2
Avery's Rock, Mass.....	1	.....	.....	.....	2
Back Beach, Me.....	1	.....	.....	.....	1
Balley Island, Me.....	1	.....	.....	.....	1
Baker Island Bar, Mount Desert, Me.....	2	.....	.....	2
Bang's Island, Me.....	1	.....	.....	.....	.....	2
Bantum Ledge, Me.....	1	1
Barnegat, N. J.....	2	1	2	2	2	.....	3	2	1	1	16
Barnegat Inlet, N. J.....	2	.....	.....	3
Barnegat Inlet (7 miles south of).....	1	1
Barnegat Light (4 miles south of).....	1	1
Bar Harbor, Mount Desert, Me.....	1	1
Bar Ledge, Petit Manan, Me.....	1	1
Bar Neck Sands, Talbot County, Maryland.....	1	1
Barred Harbor, Cape Cod.....	1	1
Barrett's Point, N. Y.....	1	.....	.....	1
Barter Island, Southeast Bay, Me.....	1	.....	.....	1
Bartlett Reef, Conn.....	1	.....	.....	.....	1
Bass Island, Cape Porpoise, Me.....	2	.....	.....	2
Bass River Breakwater, Cape Cod.....	1	.....	.....	.....	.....	1	2
Bakeman Point, R. I.....	1	.....	.....	.....	.....	.....	1
Bating Hollow Beach, L. I.....	1	1
Battery Point, Black Rock, Conn.....	1	1
Bayou Reef, South Pass, La.....	1	.....	.....	1
Bay Shore, N. J.....	1	.....	.....	.....	.....	1
Bay View, Cape Ann, Mass.....	1	.....	.....	1
Beach Island, Me.....	1	.....	.....	.....	1
Beach Point, Truro, Mass.....	1	1
Bear Point, near Addison, Me.....	1	.....	1
Bearse's Shoal, Cape Cod.....	1	.....	.....	.....	1
Beaufort, N. C.....	1	1
Beaufort Bar, N. C.....	1	2	.....	.....	1	.....	.....	2	.....	.....	6
Beaufort Reef, N. C.....	1	.....	1

TABLE 65.—*List of places on the coasts of the United States where vessels have stranded, &c.—*
Continued.

ATLANTIC COAST—Continued:

Name of place.	Fiscal year ending June 30—										Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Beaufort, S. C.							1				1
Beaver Tail Rock, R. I.	1		1	2	1		1	1	1	1	9
Beermore Ledge, Cape Ann									1	1	1
Biddeford Pool, Me.							1				1
Birch Point, Wiscasset River, Me.									1		1
Bishop and Clerk's Shoals, Mass.								1		2	3
Black Island, Me.								1			1
Black Ledge, New London, Conn.									1	1	2
Black Rock, Block Island, R. I.						1					1
Black Rock, Conn.									2	1	3
Blackwell's Island, N. Y.							1				1
Block Island, R. I.		2						4	3	1	10
Block Island (southwest shore of)										2	2
Bloody Point, Kent Island, Md.									1		1
Blue Hill Bay, Me.					1						1
Blue Rock, R. I.			1								1
Bluff Island, Saco Bay, Me.									1		1
Bodkin Bar, Chesapeake Bay							1				1
Bodkin Point (southeast bar), Chesapeake Bay										1	1
Body Island Light, N. C.										1	1
Bogue Inlet, Swansborough, N. C.							1			1	1
Bogue Island									1		1
Boisbunbert Island, Me.								1		1	1
Bolivar Beach, Tex.									1		1
Bolivar Point, Tex.				1							1
Bombay Hook, Delaware Bay									1	1	1
Bonds, N. J. (¼ mile north of L. S. S. 22, district 4)									1		1
Boon Island, Me.						1	1				2
Booth Bay, Me.			1				1	1			3
Boston Neck, R. I.							1				1
Brandywine Shoals, Delaware Bay							2	3	1	1	7
Brantford Reef, Long Island Sound									1		1
Brant Island Shoal, Pamlico Sound									1		1
Brazos Bar, Tex.					1				1		2
Brazos de Santiago, Tex.								4			4
Breaking Ledge, Me.								1			1
Brenton Reef, R. I.	1	3				1	1			1	7
Brewster's Beach, Mass.				1							1
Brewster's Reef, Fla.							1				1
Bridgehampton Beach, Long Island										1	1
Bridgeport, Conn.										1	1
Brigantine Bar, N. J.									2		2
Brigantine Shoals, N. J.	1	2	3	2		2	6	1		1	18
Brimstone Point, N. J.									1	1	1
Brownney Island (entrance to Englishman's Bay, Me.)									1		1
Brown Ledges, Penobscot Bay								1			1
Buckaroo Shoals, Va.							1				1
Buckle's Island Harbor, Me.									1		1
Bullock's Point, R. I.			1								1
Bull Rock, Boston Bay							1				1
Bunker's Ledge, Me.							1				1
Calf Island, Boston Harbor										2	2
Campobello Beach, Eastport, Me.									1		1
Caney Creek, Tex.								1			1
Cape Ann, Mass.				1						1	2
Cape Arundel, Me.								1			1
Cape Canaveral, Fla.					1						1
Cape Charles, Va.							1				1
Cape Cod (back of)									1		1
Cape Cod, Mass. (precise locality not stated)			1	1	1	1		1	2	1	5
Cape Elizabeth, Me.							1	1			4
Cape Fear, N. C.							1				1
Cape Fear River, N. C. (mouth of)								2	1	1	4
Cape Florida Light-house.										1	1
Cape Hatteras, N. C.	4	1		1	2	2		1	2		13
Cape Hatteras, N. C. (20 miles north of)										1	1
Cape Hatteras, N. C. (30 miles south-southwest of)									1		1
Cape Henlopen, Del.	1						5	1	5	5	17
Cape Henry, Va.	1	1						3		6	11
Cape Henry, Va. (4 miles south of L. S. S. No. 1)										1	1
Cape Lookout, N. C.	1	1	3		1	1	1	2	1		11
Cape May, N. J.	1					3	1	2		1	8
Cape May, Hereford Light, N. J.										1	1
Cape May Steamboat-Landing, N. J.										1	1
Cape Neddock, Me.	2								1		1

ATLANTIC COAST—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Cape Poge, Mass	1						2		1	1	5
Cape Porpoise, Me					1			1			2
Cape Romain, S. C									1		1
Cape San Blas, Fla									1		1
Cape Small Point, Me							1				1
Captain's Island, Long Island Sound.....		1									1
Caroline Shoal, N. C							1				1
Carlson's Inlet, N. J	1	1				1					3
Carter's Bar, Va		2	1						1		4
Carysfort Reef, Fla								1			1
Cash's Reef, East River, N. Y									1		1
Castle Hill, R. I									1	1	2
Cedar Island, Va				1		1	1		1		3
Cedar Keys, Fla											1
Cedar Tree Neck, Vineyard Sound.....								1			1
Chandeleur Island Light, La.								1			1
Chandeleur Island Light, La. (4 miles southeast of)									1		1
Chandeleur Island Light, La. (14 miles southwest of)									1	1	2
Charles Island, Conn								1			1
Charleston Bar, S. C							1	1			2
Charleston Harbor, S. C									2		2
Chatam Bar, Cape Cod		2		2	1	6	2		5		18
Chatham, Mass								1			1
Chebeag Island, Me									1	1	2
Cherrystone Inlet, Va									1		1
Cherrystone Light, Va. (5 miles above) ..									1	1	2
Chester River, Md. (mouth of), Chesapeake Bay										1	1
Chicamacomico, N. C	2	1									3
Chincoteague, Va			1	1			1				3
Chincoteague, Va. (15 miles north) ..										1	1
Chincoteague Shoals, Va									1	1	2
Cincinnati Bar, N. J								1			1
City Island, Long Island										1	1
Clapboard Island, Me									1		1
Clark Island, Me								1			1
Clark Island, Portsmouth, N. H									1		1
Clear Water, Fla						1					1
Clement's Cove, Me							1				1
Cliff Shore, Mass							1				1
Clinton Point, Long Island Sound.....					1						1
Coaster's Harbor, Portland Island, R. I ..			2								2
Cobb's Island, Va				1						1	2
Cobscook Bay, Me										1	1
Cold Spring Inlet, N. J					1	1	2	2	1	6	13
Common Flats, Cape Cod, Mass							1				1
Conauticut, R. I			2			2		1			5
Conch Reef, Fla										2	2
Coney Island, N. Y						1				1	2
Copps Island								1			1
Coral Reef, Fla						1					1
Core Sound, N. C								1			1
Cove Point, Chesapeake Bay (near) ..									1	1	2
Cox Head, Me									1		1
Cox's Shoal, N. J											1
Crab Meadow, Long Island Sound.....						1					1
Crabtree Point, North Haven, Me						1					1
Cranberry Island, Me									2	1	3
Cranberry Island Light, Petty Pau Reef, Me									1		1
Crocker's Reef, Fla							1		1		2
Cross Island, Me				2			2				4
Cuckolds, Me							2				2
Cumberland Island, Ga							1				1
Currituck Inlet, N. C	2		1	1		2	2	1			9
Curtis Island, off Stony Creek, Conn.....										1	1
Cushing's Island, Portland Harbor									1		1
Cutler, Me	2	4	1	2			1				10
Cuttyhunk Harbor, Mass									1	1	2
Cuttyhunk Island, Mass		1			2			2	2	2	9
Cuttyhunk Light (½ mile southwest of)											1
Damiscove Island, Me										1	1
Davis Neck, Mass								2			2
Davis Shoal, Florida Reef								2			2
Davis Straits, Herring Gut, Me										1	1
Dawson Shoal (near Watchapreague Inlet, Va.)							1		1	1	3
Deal Beach, N. J									2	1	3

TABLE 65.—List of places on the coasts of the United States where vessels have stranded, &c.—Continued.

ATLANTIC COAST—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Dearmon Ledge, near Gloucester										1	1
Decros Point, Tex.									1		1
Deer Island, Me.		1						1			2
Deer Island Shore Ledge, Me.									1		1
Delaware Breakwater, Del.	1	1		2	1		1	2	2	1	11
Dennis, Cape Cod, Mass.									1		1
Despair Island, Narragansett Bay										1	1
Devil's Back, Boston Harbor										1	1
Dicken's Point, Block Island, R. I.				1							1
Dighton, Mass.				1							1
Dix Flat, Mass.								1			1
Doboy Sound (south breakers), Ga.									1		1
Dread Ledge, Mass.							1				1
Duck Island, Mass.								1			1
Duck Key, Fla.										1	1
Duck Ledge, Me.								1			1
Dumpling Rock, Buzzard's Bay, Mass.									1		1
Dutch Island, R. I.							1		2	1	4
East Chop, Vineyard Haven.								2			3
East Rockaway Bar, Long Island										1	1
Eaton's Neck, Long Island, N. Y.							1				1
Elbow Reef, Fla.							1				1
Eldridge's Shoal, Vineyard Sound									1		1
Elihu's Island, Pawcatuck Bay, R. I.									1		1
Elizabethport Bar, N. J.							1				1
Emery's Point, Me.							1				1
Falkner's Island, Long Island Sound									1		1
Fall River, Mass.									3		3
False Cape, Va.								2			2
Fargo River, Long Island, N. Y.						1					1
Far Rockaway, Long Island										1	1
Fawn Bar, Boston Bay							1			1	2
Fenwick's Island, Md.										1	1
Fenwick's Island, Md. (10 miles south of)									1		1
Fernandina Bar, Fla.								1			1
Fire Island, Long Island, N. Y.						2	1	2			5
Fire Island, near Northport, Penobscot Bay									1		1
Fire Island Bar, Long Island, N. Y.									2		2
Fire Island Inlet, Long Island, N. Y.										1	1
Fire Island Light, Long Island, N. Y. (5 miles east of)									1		1
Fire Island Light, Long Island, N. Y. (8 miles east of)										1	1
Fisher's Island, Long Island Sound											
Fisherman's Inlet, Chesapeake Bay			2				3	1	1		7
Fisherman's Island, Me.										1	1
Fishing Island, N. H.							1		1		2
Five-Mile Beach, Cape May								1			1
Flander's Bay, Long Island										1	1
Fletcher's Neck, Me.								1			1
Flogger's Shoal, Delaware Bay								1	1		2
Flood Rock, Hell Gate, N. Y.										1	1
Florida Reef, Fla.	1			2			1			1	5
Flve Island Light-house, Me. (1½ miles northwest of)									1		1
Folly Island, Cape Porpoise, Me.									1		1
Fort Caswell, N. C.	1										1
Fort Macon, N. C.								1			2
Fort Point Rock, Gloucester Harbor										1	1
Fort Pond Bay, Long Island, N. Y.							1				1
Fort Preble, Cape Elizabeth, Me.									1		1
Fort Green, R. I.									1		1
Fort Island, Me.							1				1
Fort Taylor, Fla.								1			1
Fox Island, Me. (northern head of)									1		1
Franklin Light, Me.								1			1
French Reef, Fla.						1			1		2
Fresh-water Cove, Mass.							1				1
Frisbee Ledge, Me.							1				1
Frying-pan Shoals, N. C.	1			1							2
Gallop's Island, Boston Harbor								1			1
Galveston, Tex.				3	2		2		1		8
Galveston, Tex. (7 miles west of)										1	1
Galveston Bar, Tex.										1	1
Galveston Island, Tex. (east end of)									3		3
Gangway Rock, off Watch Hill, R. I.									1		1
Gardiner's Bay, N. Y.								1			1

TABLE 65.—List of places on the coasts of the United States where vessels have stranded, &c.—Continued.

ATLANTIC COAST.—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Gardiner's Island, Long Island Sound.....										1	1
Gay Head, Martha's Vineyard.....					1					1	2
George's Island, Boston Harbor.....								1		1	2
George's Island, Me.....						1					1
Georgetown Bay, S. C.....	2				3						5
Georgetown (outer bar), S. C.....									2		2
Gerrish Island, Portsmouth Harbor, N. H.....									1		1
Gilbert's Bar, Fla.....							1				1
Gloucester, Mass.....									3	1	4
Glover Rock, Me.....										1	1
Goat Island, Cape Porpoise, Me.....									2		2
Goat Island Point, Me.....									1		1
Goat Island, R. I.....							1				1
Good Harbor Beach, Mass.....								1			1
Goose Falls, Brooksville, Me.....								1			1
Goose Island, Long Island Sound.....									1		1
Goshen Reef, Long Island Sound.....								1	2	1	4
Grace Point, Block Island, R. I.....						1	1	1			3
Grand Manan, near coast of Me.....				1	2	2	1	1			7
Grand Manan (small island east of), near coast of Me.....									1		1
Graves, Boston Harbor.....								3			3
Gray's Ledge, Me.....							1				1
Great Bay Light, N. J.....							1				1
Great Egg Harbor, N. J.....						1	1				2
Great Island Shoal, Portsmouth, N. H.....				1		1	1		1		3
Great Ledge, Mass.....							1				1
Great Rock, near Seaconnet, R. I.....									1		1
Great Point, Nantucket.....	1	2		1	3		1				8
Great Pond, N. J.....								1			1
Grecian Shoals, Fla.....							1				1
Green Island, Boston Harbor.....								1			1
Green Island Ledge, Me.....						1					1
Green Island Reef, Casco Bay.....								1	1		2
Green's Pond, Long Branch, N. J.....									1		1
Green Run Inlet, Md.....									1		1
Guilford, Conn.....							1				1
Gull Rock, Long Island Sound.....							1				1
Gull Rock, Newport Harbor.....								2			2
Gull Rock, Pamlico Sound.....										1	1
Gurnet, Mass.....										1	1
Guy's Ledge, Me.....							1				1
Hallet's Point, Hell Gate, N. Y.....									2		2
Hampton Bar, Va.....								1	1		2
Hampton Beach, N. H.....	1										1
Hampton Roads, Va.....										1	1
Handkerchief Shoal, Mass.....	1							2			3
Harbor Island, Me.....									1		1
Harding's (entrance to Boston Harbor).....									1		1
Harding's Beach, Cape Cod Bay.....									1		1
Hart Island, Long Island Sound.....					1		2	1	2	2	8
Harwich Bar, Mass.....									1		1
Harwichport, Mass.....									1		1
Haskell Island, Me.....									1		1
Hatchett's Point (one mile west of).....										1	1
Hatteras Inlet, N. C.....		5						2	4		11
Hatteras Light, N. C. (8 miles north of).....								1			1
Hatteras Light, N. C. (30 miles north of).....									1		1
Hatteras Shoal, N. C.....									1		1
Hatteras Swash, N. C. (2 miles from Inlet Light).....									1		1
Hawes' Shoal, Vineyard Sound.....										1	1
Hawkins' Point, Chesapeake Bay.....								1			1
Head Harbor Island, Me.....							1				1
Hedge Fence Shoal, Mass.....		1						2	1	2	6
Hell Gate, N. Y.....	3		3			2	4	6	3		21
Hell Gate (Steep Rock), N. Y.....									1	1	2
Hempstead, Long Island, N. Y.....	1						1				2
Hen and Chickens Reef, Del.....					1						1
Hereford Inlet, N. J.....							3	1	2		6
Herring Bay, Chesapeake Bay.....								2			2
Herring Gut, Me.....			1							2	3
Highland Light, Cape Cod.....							1			1	2
Highland Light, N. J. (3 miles from).....									1		1
Highlands, N. J.....				1				1			2
Hillsborough Inlet, Fla.....										1	1
Hillsborough River, Fla.....							1				1

TABLE 65.—*List of places on the coasts of the United States where vessels have stranded, &c.—Continued.*

ATLANTIC COAST—Continued.

Name of place.	Fiscal year ending June 30.—										Total.
	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	
Hill's Point, Chesapeake Bay								1			1
Hodgdon Cove, Tremont, Me.									1		1
Hodgdon's Ledge, Me.										1	1
Hog Island, Va.		2	3		1	3	3		3		17
Holland Point, Chesapeake Bay										1	1
Holmes's Hole, Mass.							1	1			2
Hope Island, R. I.					1						1
Horn Island, Mississippi Sound									1		1
Horses' Race, Boston Bay								1			1
Horsehoe Shoal, Nantucket Sound			1								1
Horton's Point, N. Y.						1		1			2
Horton's Point, N. Y. (3 miles east of)									1		1
Horton's Point, N. Y. (7 miles west of)										2	2
Horton's Point, N. Y. (10 miles west of)									1		1
Horton's Point, N. Y. (12 miles west of)										1	1
Hough's Beach, Gloucester Harbor, Mass.									1		1
Hunting Island, S. C.								1		1	2
Huntington Neck, Long Island Sound									1		1
Hyannis, Mass.									2	1	3
Hypocrites, Townsend Harbor, Me.										1	1
Indianola, Tex.				1		1					2
Indianola, Tex. (7 miles southwest of)									5		5
Indianola, Tex. (3 miles west of)									1		1
Indianola, Tex. (2 miles southwest of)									2		2
Indianola, Tex. (7 miles south of)									3		3
Indian Point, Cape Rosier, Penobscot Bay, Me.										1	1
Indian River Inlet, Fla.	1		1	1							3
Ingraham Point, Me.								1			1
Inlet Shoals, N. J.									2		2
Inman Bar, Nantucket.				1							1
Ipswich Bar, Mass.								2	4		6
Island Bank, N. J.									1		1
Island Ledge, Mass.									1		1
Islesborough, Me.		1									1
Isles of Shoals, N. H.									1	1	2
Jabez Rock, Guilford Harbor, Conn.										1	1
Jackson's Creek, Va.										1	1
Jamaica Island, Kittery, Me.									1		1
James Ledges, Wickford, R. I.									1		1
Jameson Point, Me.									1		1
Jerry's Point, N. H.								1			1
Jewell's Island Reef, Me.										1	1
Joe Flogger, Delaware Bay										1	1
Jones' Beach, Long Island, N. Y.									3		3
Jones' Hill, N. C. (near life-saving station, No. 4, district 6)										1	1
Jones' Inlet, Long Island, N. Y.					1				1	2	3
Jonesport, Me.	2	1	1	3	4	3					14
Jupiter Light, Fla.				4	1	1					6
Jykell Island, Ga.										1	1
Kaga Ledge, Muscongus Bay, Me.										1	1
Kettle Bottom Rocks, R. I.			1	1							2
Key West, Fla. (southwest Point Quicksand)									1		1
Key West Harbor, Fla.										1	1
Key West Island, eastern beach.										1	1
Killpond Shoal, Mass.								1			1
Kinnekeet, N. C.	1					2					3
Kingfish Shoal, Fla.								1			1
Kittery Point, Me.									2		2
Kittyhawk, N. C.										1	1
Knowlton's Beach, Rockport, Mass.									2		2
Lambert's Cove, Vineyard Sound									1		1
Lane's Island, Me.									1		1
Last Island, Gulf of Mexico.									1		1
Lattimer's Reef, Long Island Sound	1								1		2
Leete's Reef, Conn.										1	1
Leighton's Point, Pembroke, Me.										1	1
Lewes, Del.										1	1
Lewistown, Del.								2		3	6
L'Homme à Dieu Shoal, Vineyard Sound									1		1
Libby Island, Me.	1				1					2	3
Little Beach, N. J.								1			1
Little Cranberry Island, Me.									1		1
Little Cumberland Island, Ga.								1			1
Little Egg Harbor, N. J.	1		1		3		1		4		10

TABLE 65.—List of places on the coasts of the United States where vessels have stranded, &c.—Continued.

ATLANTIC COAST—Continued.

Name of place.	Fiscal year ending June 30—											Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.		
Little Gull Island, Long Island Sound.....									1		1	
Little Inlet, Long Island Sound.....									1		1	
Little Island, Vineyard Haven.....							1				1	
Little Moriches Beach, Long Island, N. Y.....								1			1	
Little River Island, Me. (near light-house).....									1		1	
Little Round Shoal, Mass.....						1					1	
Little Spoon Island, Me.....										1	1	
Lloyd's Neck, Long Island.....								1			2	
Lobster Rocks, Beverly Harbor, Mass.....										1	1	
Lockwood's Folly, N. C.....								1	1		2	
Long Beach Shoal, N. J.....				1							1	
Long Branch, N. J.....	1	1	1					1	3		8	
Long Island Coast (precise locality not stated).....	1	2	4	2	1				1		12	
Long Island Harbor Head, Islesborough, Me.....									1		1	
Long Island Sound (precise locality not stated).....		1			6						7	
Long Land Shoal, Long Island Sound.....										1	1	
Long Shoal, Nantucket.....										2	2	
Lovell's Island, Boston Harbor.....								1			1	
Lowell's Point, Me.....							2				2	
Lower Clapboard Island Ledge, Me.....									1		1	
Lower Hell Gate, Me.....							1				1	
Lubec Narrows (Gun Rock), Me.....									1		1	
Ludington Reef, New Haven Harbor.....									1		1	
Ludlam's Beach, N. J. (near Corson's Inlet).....										1	1	
Lunging Island, Isles of Shoals, N. H.....									1		1	
Lynn Haven Bay, Va.....							1			1	2	
Machias, Me.....									1		1	
Machiasport, Me.....			1						2		3	
Machipungo Shoal, Va.....										1	1	
Main Inlet Bar, N. C. (2½ miles northeast of).....										1	1	
Mansfield Ledge, Me. (entrance to Deer Island Thoroughfare).....									1		1	
Marblehead, Mass.....			2								2	
Marblehead Neck, Mass.....									1		1	
Mark Island Ledge, Penobscot Bay.....									1		1	
Mark Island Reef, Me.....							1				1	
Marsh Bank Bar, off Harwich, Mass.....									1		1	
Marquessa, Fla.....							1	1	1	2	5	
Matagorda, Tex. (10 miles southwest of).....									2		2	
Matagorda, Tex. (17 miles east of).....									1		1	
Matagorda, Tex. (7 miles south-southeast of).....									1		1	
Matagorda, Tex. (near Half Moon Reef Light).....									1		1	
Matagorda Bay, Tex.....						1	2		1		4	
Matagorda Bayou, Tex.....									1		1	
Matagorda Island, Tex.....									3		3	
Matagorda Peninsula (6 miles from mouth of Caney Creek).....									1		1	
Matinicoek Point, Long Island.....										1	1	
Menanktesuck Point, Conn.....							1				1	
Merwin's Point, Conn.....										1	1	
Metompkin's Inlet, Va.....										1	1	
Micomit Rip, Mass.....							1				1	
Middle Reef, near Woolsey's Point, L. I.....										1	1	
Milk Island, Mass.....							1	1			2	
Mill Creek Flats, Hampton Roads.....									1		1	
Misham Point, Mass.....						1					1	
Mispillion Creek, Del.....							1				1	
Molasses Reef, Fla.....										1	1	
Monhagan Island, Me., (southwest point of).....									1		1	
Monmouth Beach, N. J.....										1	1	
Monomoy Point, Cape Cod.....									1	2	4	
Montauk Point, Long Island.....	1		1	1							3	
Mooseabeck Light, Mistake Island, Me.....								1		1	2	
Mooseabeck Reach, entrance to Englishman's Bay, Me.....									1		1	
Moose Island, Booth Bay Harbor, Me.....								1			1	
Morris Cove, New Haven Harbor.....								1		1	2	
Mount Desert, Me.....				1							1	
Munroe's Island, Penobscot Bay, Me.....										1	1	
Muscle Ridges, Me.....								1			1	
Muscle Ridge Channel, Me. (entrance to).....									1		1	
Muskeget Shoal, Nantucket Sound.....			1				1				2	
Musquito Bar, Fla.....									1		1	
Musquito Inlet, Fla.....				1	2					1	4	
Musquito Island, Me.....								1			1	
Mustang Island, Tex.....							1				1	

TABLE 65.—List of places on the coasts of the United States where vessels have stranded, &c.—Continued.

ATLANTIC COAST—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Myrtle Island Beach, Va.....										1	1
Mystic, Mass.....								1			1
Nag's Head, N. C.....					1						1
Nantucket, Mass.....	2	3	1	1	1	2		4			14
Nantucket Shoal, south side of.....									1		1
Napatree Point, Conn.....									1		1
Napeague, Long Island.....									1		1
Nappertrice Point, Martha's Vineyard.....						1					1
Narragansett Pier, R. I.....						1	1				2
Nashawan Island, Vineyard Sound.....					2					1	3
Nash's Island, Me.....							1				1
Nassau Inlet, Fla.....							1				1
Nausett, Cape Cod.....	1	2			1		9	1	1	3	18
Naushton Island, Vineyard Sound.....									1		1
Navy Cove and Mobile Point (between), Miss.....								1			1
Negro Island (northeast side of), Saco Bay, Me.....									1		1
New Bedford Harbor, Mass.....								1		1	2
Newburyport, Mass.....							1	1			2
Newburyport Bar, Mass.....									1		1
Newcomb's Hollow, Mass.....									2		2
New Haven, Conn.....	1		1					1	1		5
New Inlet, N. C.....			1					2			4
New Inlet, N. C. (5 miles north of).....									1		1
New Inlet, N. C. (8 miles south of).....									1		1
New Inlet, N. J.....								1			1
New Inlet, Long Island, N. Y.....									1		1
New Jersey coast (precise locality not stated).....	2	1	3	1	1						8
New London, Conn.....						2				2	4
New London Light-house, Conn.....										1	1
Newport, R. I.....	1							1			3
Newport News, Va.....										1	1
Nigger Island, Me.....							1				1
Nigger Point, Hell Gate, N. Y.....									2	1	3
Nix Mate, Boston Harbor.....										1	1
Nomineaset Island, Vineyard Sound.....								1			1
Norman's Woe, Cape Ann, Mass.....							1				1
North Bar, Hereford, N. J.....										1	1
North Breakers, mouth of Merrimac River, Mass.....									1	2	3
North Breakers, Mosquito Inlet, Fla.....									1		1
North Brother, Hell Gate, N. Y.....						1			1		2
North Inlet, S. C.....								1			1
North Point, Chesapeake Bay (3 miles southeast of).....									1		1
Northport, Me.....										1	1
Norton Island, Seal Harbor, Me.....										1	1
Norton's Shoals, Mass.....							2				2
Norwalk Island, Long Island Sound.....								1			1
Noye's Point Rocks, R. I.....										1	1
Oak's Ledge, Mass.....							1				1
Ocean Grove, N. J.....							1			1	2
Ocean View, Va.....										1	1
Ocracoke Inlet, N. C.....						1				3	4
Odiorne Point, 2 miles south of Portsmouth, N. H.....								1	1		2
Old Cilley Ledge, Me.....								1	1		2
Oldfield Point Light, Long Island, N. Y.....	1										1
Old Inlet, Long Beach, N. J.....									1		1
Old Man Ledge, Me.....								1			1
Old Newton Rock, Mass.....			1								1
Oregon Inlet, N. C.....	3	5	7	1	7	3		1			27
Orleans, Cape Cod.....										2	2
Orr's Island, Me.....			1						1		2
Otter Island Ledge, Me.....									1		1
Owl's Head, Me.....							1	1			2
Oyster Beds Beacon, Savannah River.....									1		1
Oyster Bed Reef, N. Y.....								1			1
Oyster Island, N. Y.....							1				1
Oyster Rock, Wilmington Harbor, N. C.....									1		1
Pan Quogue, Long Island.....							1				1
Parker's Cove, Islesboro', Me.....									1		1
Pascagoula Bar, Miss.....								1			1
Pasque Isle, Vineyard Sound.....							2	3		1	6
Pass à l'Outre, mouth of Mississippi River.....							1	1			2
Pass Cavallo, Tex.....	1				1	1					3
Pass Cavallo Bar, Tex. (30 miles southwest of).....									1		1
Pass Christian, Miss.....							1				1
Patience Island, R. I.....			1								1

TABLE 65.—List of places on the coasts of the United States where vessels have stranded, &c.—Continued.

ATLANTIC COAST—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Patuxent River (mouth of).....										1	1
Pavilion Beach, Mass.....			1						2		3
Peaked Hill Bar, Cape Cod.....						1		2	1	1	5
Peak's Beach, N. J.....						1					1
Pelican Shoals, Fla.....	1				1			1	1		4
Pemaquid Light, Me.....							1				1
Pembroke, Me.....								1			1
Pensacola Bay Bar, Fla.....									1		1
Pensacola, Fla.....		1	1			2					4
Pepperell's Cove, off Portsmouth Harbor.....										1	1
Perdido Bay Bar, Fla.....									1		1
Perdido Inlet, Fla.....			1								1
Perkin's Ledge, mouth of Kennebec River, Me.....								1			1
Perry Mill Wharf, Newport, R. I.....										1	1
Petit Manan, Me.....							1	1		1	3
Phipsburg Ledge, Me.....									1		1
Pickard's Point, Penobscot Bay.....								1			1
Pickle Reef, Fla.....										1	1
Pickle Reef and French Reef (between), Fla.....									1		1
Pigeon Point.....									1		1
Plum Gut, Long Island Sound.....								1			1
Plum Island, Long Island Sound.....						1					1
Plymouth, Mass.....						1					1
Point Allerton, Boston Harbor.....							1	1			2
Point au Fer, Fla.....								1			1
Point Gammon, Mass.....							1				1
Point Isabel, Tex.....								3			3
Point Judith, R. I.....	1				2		1	2	1	1	8
Pollock Rip, Mass.....								1	1		2
Pond Cove, Cape Elizabeth, Me.....										1	1
Pond Cove Island, Englishman's Bay, Me.....									1		1
Pond Island, Me.....									1	1	2
Pondquogue Light, Long Island.....									1		1
Poplar Point Light, R. I.....			1								1
Portland Head, Cape Elizabeth, Me.....									1		1
Port Jefferson, L. I.....										1	1
Port Penn, Delaware Bay.....										1	1
Portsmouth, N. H.....										1	1
Pot Rock, Hell Gate.....										1	1
Powder Horn Bayou, Tex.....							1		2		3
Prospect Harbor, Me.....									5		5
Provincetown, Cape Cod.....						4			5	2	15
Pulpit Harbor, North Haven.....									1		1
Pumpkin Hill Shoal, Charleston, S. C.....									1	1	2
Pumpkin Rock.....									1		1
Quogue, Long Island, N. Y.....					1	1					2
Quonochontang Beach, R. I.....									1		1
Race Point, Fisher's Island, Long Island Sound.....										1	1
Race Point, Mass.....				1	1	1	3	2	4		12
Race Rock, Long Island Sound.....										1	1
Ragged Island, Penobscot Bay.....									1		1
Ram Island, Me.....									1		1
Ram Island Reef, Long Island Sound.....									1		1
Ram's Head Ledge, Boston Harbor.....										1	1
Red Fish Light, Tex. (2 miles east of).....									1		1
Red Spring Point (near Glen Cove Dock), Long Island.....										1	1
Reedy Island, Delaware Bay.....									1		1
Revenue Point Shoal, Ala.....								1			1
Richmond Island, Me.....							1		1		2
Rip Raps, mouth of Chesapeake Bay.....										1	1
Robert's Harbor, Me.....									1		1
Rockaway, Long Island.....			2			1	1			1	5
Rockaway Shoals, Long Island Sound.....									1		1
Rock Island Beach, Long Island, N. Y.....								1			1
Rock Point, Chesapeake Bay.....									1		1
Rockport, Mass.....							1				1
Rocky Point, Long Island Sound.....									1		1
Rocky Point, Mass.....							1				1
Romer Shoals, N. Y.....							1	1	3		5
Rose Landing, Long Island.....											1
Rudder Rock, Deer Island, Me.....										1	1
Rye Beach, N. H.....				1							1
Sabine Pass, La.....									1		1
Saddle Back Island, Penobscot Bay.....										1	1
Sail Rock, Lubec, Me.....				1							1

TABLE 65.—List of places on the coasts of the United States where vessels have stranded, &c.—Continued.

ATLANTIC COAST—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Saint Andrew's Bar, Fla.....				1						1	1
Saint Augustine Bar, Fla.....										1	1
Saint Augustine Light, Fla.....		1			1		1	1			4
Saint Catharine's Sound, Ga.....						1	1				1
Saint George's Island, Fla.....						1					1
Saint Helena Sound, S. C.....									1		1
Saint John's Bar, Fla.....		1					3	1		1	6
Saint Joseph's Island, Fla.....		1									1
Saint Mark's, Fla.....				1							1
Saint Simon's Bar, Ga.....					2		1				3
Salisbury Beach, Mass.....									1		1
Salt Island Ledge, Mass.....								1			1
Saluria Bayou, Tex.....									1		1
Saluria, Tex.....									1		1
Sand Beach (5 miles south of Cape Henlopen).....										1	1
Sandy Hook, N. J.....	4	1	1	2	1		4		4	1	18
Sandy Point, Chesapeake Bay.....										4	4
San Luis Pass, Tex.....								4			4
Santa Rosa Island, Fla.....										1	1
Santa Rosa Island, Tex.....							1	1			3
Sapelo Shoals, Ga.....				1	2						4
Satilla River, Ga.....							1				1
Sangatuck, Conn.....			1								1
Saybrook Bar, Conn.....				2	2		1	1	1	2	9
Scituate, Mass.....	1	1	2	1	1	3		3		2	14
Sculpin Rock, Me.....								1			1
Seaconnet Point, R. I.....									1		1
Seaconnet River (mouth of, west side), R. I.....									1		1
Sea Grove, Cape May, N. J.....										1	1
Seal Cove, Mount Desert, Me.....									1		1
Seal Island Ledge, Me.....										1	1
Seal Ledge, Me.....									1		1
Searsport Harbor, Me.....								1			1
Seavey's Island, Portsmouth Harbor, N. H.....								1			1
Seven-Mile Beach, N. J.....					1						1
Sewell's Point, Va.....									1		1
Shabbit Island, Me.....								1			1
Shallotte Bar, N. C. (west side).....										1	1
Shark River, N. J.....					2		1				3
Sheep's-Head Bay Bar, Long Island.....							1				1
Shinnecock, Long Island.....									2	1	3
Ship Island, Conn.....	1										1
Ship Shoals, Va.....	1									1	2
Shippen's Reef, Long Island Sound.....				1	1		1	1			3
Shovelful Light, Nantucket Sound.....											1
Shovelful Shoals, Cape Cod.....								1	3		4
Simonton Cove, Cape Elizabeth, Me.....									1		1
Sinepuxent, Md.....		1				1	1			1	4
Skinner's Head, Marblehead Harbor.....										1	1
Smith's Island, Va.....			2			1			3		6
Smith's Island, Nantucket Shoals.....								1			1
Smith's Ledge, Conn.....			1				1				2
Smith's Point, Chesapeake Bay.....							1				1
Smith's Reef, Long Island Sound.....							1				1
Smith's Rock, Scituate Neck, Mass.....										1	1
Smithtown Bay, Long Island Sound.....										1	1
Smithtown Beach, Long Island Sound.....										1	1
Smithville, N. C.....							1				1
Snow's Flats, Me.....							1				1
Southampton, Long Island.....					1		1	1			3
South Breakers, Ipswich, Mass.....									1		1
South Dennis, Mass.....					3						3
South Harbor, Me.....		1									1
South Marshfield, Beattie's Island, Me.....								1			1
Southport Bar, Conn.....							1			1	2
Southport, Me.....								3			3
South Saint George, Me.....										2	2
Southwest Harbor, Me.....							1				1
Southwest Pass, mouth of Mississippi River.....										1	1
South Yarmouth, Mass.....		1									1
Sow and Pigs, Mass.....							1				1
Spectacle Island, Cumberland Inlet, Ga.....										1	1
Spouting Rock, R. I.....			1								1
Spruce Head, Me.....				1							1

TABLE 65.—List of places on the coasts of the United States where vessels have stranded, &c.—Continued.

ATLANTIC COAST—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Whale Rock, R. I.					1						1
Whale Rock Light, Me.								1			1
Wheeler Bay, Me. (Red Ledge in)									1		1
White Head, Me.							1	2			3
Wicomico River, Md. (mouth of)										1	1
Wilke's Ledge, Buzzard's Bay								1			1
Willoughby Shoal, Chesapeake Bay							1				1
Wilmington Bar, N. C.							1				1
Windmill Point, Stonington, Conn.									1		1
Winter Harbor, Me.										1	1
Winter Quarter Shoals, Md.				1			2	1	1		5
Winthrop Beach, Mass.							1	1			2
Winyah Bay, S. C.						1					1
Wire's Point, Onancock, Va.									1		1
Wiscasset Ledge, Me.						1					1
Wolftrap Shoal, Mob Jack Bay, Va.									1		1
Wood End, Cape Cod.								5	1	1	7
Wood's Hole, Mass.									1		1
Wood Island, Me.	1		1			1					3
Woodward's Cove, Grand Manan, Me.									1		1
York Beach, Me.							1		1		2
York Ledge, Me.								1		1	2
York Narrows, Me.							1				1
York River, Me.								1			1
Young's Point (entrance to Fox Islands Thoroughfare), Me.									1		1

PACIFIC COAST.

Admiralty Inlet, Puget Sound									1		1
Albion River, Cal.		1									1
Aquina Bar, Oreg.									1		1
Arch Rock, Oreg.		1									1
Arestable Island, Alaska.						1					1
Astoria, Oreg.								1			1
Baker's Bay, Columbia River.				1							1
Baker's Island, San Francisco Bay	1	1		1							3
Bowen's Landing, Cal.		2		1						2	5
Cape Blanco, Oreg.			1								1
Cape Chalkine, Alaska	1										1
Cape Edgecombe, Alaska		1									1
Cape Flattery, Wash.		1			1	1			1	1	5
Cape Foulweather (10 miles north of), Wash.									2		2
Cape Mendocino, Cal.	1										1
Cape Pinos, Cal.			1								1
Caprian Islands, Alaska									1		1
Carquinez Strait, Cal.										1	1
Casper Creek, Cal.				3							3
Casper River (mouth of), Cal.									1		1
Clarence Straits, Alaska				1							1
Clark's Island Reef, Washington Sound								1			1
Clatsop's Spit, Columbia River								1	1		2
Columbia River		1		1				2		1	4
Cook's Inlet, Alaska			1	2							4
Coos Bay, Oreg.		3	2				2				7
Coos Bay Bar (9 miles north of), Oreg.							1	1			2
Coquilla, Cape Arago, Oreg.					1						1
Coquilla River (5 miles south of), Oreg.											1
Cotteneva, Cal.										1	1
Crescent City, Cal.											1
Cuffey's Cove, Cal.	1				1		1			1	4
Davenport's Landing, Cal.		1			1						2
Destruction Island, Wash.									1		1
Discovery Island, Straits of Juan de Fuca			1					1			2
Duncan's Landing, Cal.								1			1
Dungeness Spit, Wash.		1					1				2
Duxbury Reef, Cal.	1						1	1			3
Eagle Harbor, North Point Shoal.										1	1
Farallones, Cal.					1			1			2
Fish Rock (near bluff), Cal.								1			1
Fisk's Mill, Sonoma County, Cal.									1		1
Fort Point, San Francisco Bay	2				1			1		1	5

TABLE 65.—List of places on the coasts of the United States where vessels have stranded, &c.—Continued.

PACIFIC COAST—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Fort Ross, Cal.								1			1
Fort Stephens, Oreg.								1			1
Four Fathom Bank, Cal.						1					1
Half Moon Bay, Cal.		2									2
Humboldt Bar, Cal.				1							1
Kake Island (north side of), Alaska.							1	1			2
Kalwack, Alaska.				1							1
Kodiak Harbor (21 miles southeast of), Alaska.								1			1
Little Alcatraz Rock, San Francisco Bay.	1								1		2
Little River, Cal.	1										1
Little River Head, Cal.									1		1
Marrow Stone Point (northwest side of).									1		1
Mendocino, Cal.		1			2						3
Mile Rock, entrance to San Francisco Bay.	1		1							1	3
Mora Bay, Cal.									2		2
Newport, Cal.							1				1
North Farallon Island, Cal.								1			1
North Head, San Francisco Bay.	1							1			2
Novara River, Cal.					1						1
Ocean Side House, Cal.						1					1
Orcus Islands, Wash.	1										1
Ounga, Choumagin Islands, Alaska.										1	1
Pajaro, Cal.				1							1
Piedras Blancas, Cal.			2								2
Pigeon Point, Cal.		1									1
Pillar Point, Cal.										1	1
Point Arena, Cal.					1		1	1			3
Point Arena, Cal. (15 miles from).										1	1
Point Arena Harbor, Cal.								1			1
Point Arena Light-House (near), Cal.									1		1
Point Bonita, Cal.					1						1
Point Diablo, Cal.					1						1
Point Fernin, Cal.					1						1
Point Gorda, Cal.							1				1
Point Grenville, Wash.							1				1
Point Hueneme, Cal.				1							1
Point Lobos, Cal.		1									1
Point New Year, Cal.	1										1
Point of Rocks, Wrangel, Alaska.									1		1
Point Pedro, Cal.		1			1						2
Point Reyes, Cal.				2				1		1	4
Point Sal, Cal.									1		1
Point Sur, Cal.								1	1		2
Point Vincent, Cal.	1										1
Point Wilson, Wash.									1		1
Port Orford, Oreg.									1		1
Rincon Rock, San Francisco Bay.					1						1
Rocky Point, Cal.	1								1		2
Rogue River, Oreg.								1			1
Rogue River (mouth of), Oreg.									1		1
Salmon Creek, Cal.						1					1
San Buenaventura, Cal.									3	1	4
Sand Island, Oreg.							1		1		2
Sand Spit, Oreg.			1								1
San Francisco Bay.					3		1				4
San Juan Harbor, Straits of Fuca.							1				1
San Juan Passage, Wash.										1	1
San Pedro, Cal.						1					1
Santa Barbara, Cal.		1									1
Santa Cruz Light-House Point, Cal.										1	1
Shoalwater Bay, Wash.									1		1
Smith's Point (below Astoria), Oreg.									1		1
Soquel, Cal.				1							1
South Beach, San Francisco Bay.								1	1		2
South Beach, Yaquina Bay, Oreg.									1		1
Stewart's Point, Cal.				6							7
Stillwater Cove, Cal.				1							1
Straits of Fuca.			1					1			2
Timber Cove, Cal.					1						1
Tomales Bar, Cal.		1					1				2
Tomlinson's Reef, Wilmington Bay, Cal.									1		1
Umpqua Bar, Oreg.	2					2					4
Umpqua River (mouth of), Oreg.							1		1		2
Water Bay Bar, Wash.								1			1
Yaquina Bay, Oreg.							1			1	2

TABLE 65.—List of places on the coasts of the United States where vessels have stranded, &c.—Continued.

LAKE COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Detroit River.....	1	6	1			2		2			12
Devil's Nose, Lake Ontario.....				1							1
Devil River, Lake Huron.....			1								1
Dorney's Reef Point, Lake Michigan.....							1				1
Dover Bay, Lake Erie.....					1						1
Drummond Island, Lake Huron.....			1								1
Duck Island, Lake Ontario.....						1					1
Duluth, Lake Superior.....						1					1
Dunkirk Harbor, Lake Erie.....				3	1			2	1		7
Dykesville, Lake Michigan.....					1						1
Eagle Harbor, Lake Superior.....		1				1	1				3
East Sister Island, Lake Erie.....				1	1	1					3
Eleven-Foot Shoals, Green Bay.....					1			1			2
Elk Island, Saint Clair River.....			2								2
Ellison's Bay, Wis.....										1	1
Ellsworth River, Lake Michigan.....						1					1
Elm Reef, Lake Michigan.....				1							1
Erie Harbor, Lake Erie.....	2	2	2	3	3	2		2	1		17
Escanaba, Lake Michigan.....					1						1
Euclid, Lake Erie.....					1						1
Evanston, Lake Michigan.....		2				2	2				6
Fairport Harbor, Lake Erie.....				1	1		1	2	1		6
False Ducks, Lake Ontario.....						1					1
False Presque Isle, Lake Huron.....	1			1					2		4
Featherbed Shoals, Lake Ontario.....								1			1
Ferrer's Point, Lake Ontario.....			1								1
Fighting Island, Detroit River.....		1						1			2
Fisherman's Shoal, Lake Michigan.....									1		1
Fitzgerald Island, Lake Huron.....					1						1
Forest Bay, Lake Huron.....								1			1
Forrester, Lake Huron.....					1						1
Fort Niagara, Lake Ontario.....				1							1
Fort Shoals, Lake Ontario.....					1						1
Forty-Mile Point, Lake Huron.....					1		1	1		1	3
Frankfort, Lake Michigan.....						2	1	1	2		6
Frankfort, Lake Ontario.....							2				2
Gallop Rapids, Saint Lawrence River.....		1			1	1	2				3
Garden Island, Lake Ontario.....						1					1
Genesee River, Lake Ontario.....					1						1
Genesee, Lake Huron.....					1						1
Geneva (off), Lake Erie.....								1			1
Good Harbor Bay, Lake Michigan.....									2		2
Goodrich, Lake Huron.....				1	1	1					3
Grable's Point, Lake Erie.....								1			1
Graham's Shoals, Lake Michigan.....	1	1		1	1	1	1	1			7
Grand Haven, Lake Michigan.....	6	5		2	1		6	1	6	1	28
Grand Island, Lake Superior.....			3	2		1	1	1	1	1	10
Grand Marais, Lake Superior.....									1		1
Grand River, Lake Erie.....						1	1				2
Grand River, Lake Michigan.....								2		1	3
Gray's Reef, Straits of Mackinac.....		1									1
Green Point, Lake Ontario.....	1										1
Green's Reef, Lake Erie.....					1						1
Griffith's Island, Lake Huron.....						1					1
Grimes's Reef, Lake Michigan.....		1									1
Grindstone City, Lake Michigan.....									1	1	2
Grosse Island, Detroit River.....	1	1	1				1		1	1	6
Grosse Point, Lake Michigan.....				1	1						2
Gull Island, Lake Ontario.....								1			1
Gull Island Reef, Lake Erie.....	3										3
Gull Point, Lake Ontario.....					2						2
Hammond's Bay, Lake Huron.....		1	3		1	1	1				7
Harrisville, Lake Huron.....		1	1								2
Hat Island, Lake Michigan.....				1							1
Hat Island Reef, Green Bay.....								1			1
Herson's Island, Saint Clair River.....		2		1				1			4
Highland Reef, Lake Michigan.....			1					1			1
Hog Island, Lake Saint Clair.....								1			1
Hog Island Reef, Lake Michigan.....			1	1	1						3
Holland, Detroit River.....								1			1
Holland, Lake Michigan.....	1		1			1			1	1	5
Horn's Pier (locality unknown).....						1					1
Horseshoe Island, Lake Superior (supposed).....								1			1
Houghton Centre, Lake Erie.....		1									1
How Island, Lake Ontario.....					2						2

TABLE 65.—List of places on the coasts of the United States where vessels have stranded, &c.—Continued.

LAKE COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Huron City, Lake Huron				1							1
Huron Island, Lake Superior									1		1
Inverhuron Harbor, Lake Huron								2			2
Isle Royale, Lake Superior						1				1	2
Johnson's Island, Saint Lawrence River								1			1
Kalamazoo River, Lake Michigan	1	1									2
Kederhouse Pier, Lake Michigan		1									1
Kelley's Island, Lake Erie			1			1	2	1	1		6
Kenosha, Lake Michigan	1				2					1	4
Kettle Point, Lake Huron				1	1						2
Kewaunee, Lake Michigan		2	1		1		2		1		7
Keweenaw Bay, Lake Superior										1	1
Kincardine, Lake Huron			1		4						5
Lake George Flats, Sault River								1			1
Langley's Pier, Lake Michigan							1				1
Latman Point, Lake Ontario				1							1
Laughing White-fish Reef, Lake Superior					2						2
Leamington, Lake Ontario									1		1
Leland, Lake Michigan					3	1					4
Lexington, Lake Huron		1							1		2
Lime Kiln Reef, Detroit River						2	4	3	2	1	12
Limestone Island, Georgian Bay									2	1	3
Little Bay de Noquet, Lake Michigan			1								1
Little Graham Shoals, Straits of Mackinac							1				1
Little Manitou Island, Lake Michigan								1			1
Little Sister Reef, Lake Michigan							1				1
Little Sturgeon Bay, Lake Michigan									1		1
Lone Rock, Lake Michigan									1		1
Long Island, Lake Ontario							1				1
Long Point, Lake Erie	3	3	7	6	2	1	5	2			29
Louise Island, Lake Michigan		1									1
Ludington, Lake Michigan				2		2		1			5
Mackinac, Straits of	5	16	3	4			1				29
Mackinac City, Lake Michigan									1		1
Madison, Lake Erie					1						1
Malden, Detroit River							1	1			2
Mammy Judy Light, Detroit River											1
Manistee Harbor, Lake Michigan	5		2	2		1	2	1	2	1	16
Manitou, Lake Michigan		2				1					3
Manitowoc, Lake Michigan								1	3		4
Marblehead, Lake Erie	1					1					2
Marblehead (between Catawba Island and Marblehead)									1		1
Marquette, Lake Superior			1			2	2				5
Maumee Bay, Lake Erie						1					1
Menomonee, Lake Michigan	1										1
Michigan City, Lake Michigan						2	1	2	1		6
Michipicooton, Lake Superior						1					1
Middle Bass Island, Lake Erie								1			1
Middle Island, Lake Huron	3	5	1			1	1				11
Middle Sister Island, Lake Erie		1	1			2					4
Milwaukee, Lake Michigan	4	2	4	2		1	2	1	2		18
Minerva, Lake Erie		1									1
Mission Point, Lake Michigan									1		1
Mission Reef, Lake Michigan				1							1
Mohawk Island, Lake Michigan	1										1
Morgan's Point, Lake Erie	1				1	1		1		1	5
Morrisburg, Lake Ontario								1			1
Mud Lake (near Bridwell, Chicago)											1
Muskegon, Lake Michigan	3	3	1	1		2	3	1	1	1	16
Napanee, Lake Ontario				2							2
Neebish Rapids, Saint Mary's River			1		1	1	4	4	1		12
New Buffalo, Lake Michigan	1		1	1							4
New Castle, Lake Ontario		1							1		1
New River, Lake Huron		1									1
Niagara Reef, West Sister Island, Lake Erie										1	1
Niagara River, Lake Erie					1		1				2
Nicholson Island, Lake Ontario					1						1
Nine-Mile Creek, Lake Ontario	1				2						3
Noon Point, Lake Huron			1								1
North Bass Island, Lake Erie			1								1
North Bay, Lake Michigan			1		1			1	1		4
North Harbor Reef, Lake Erie	1		1		2			2			6
North Manitou, Lake Michigan	1	1	3	1	1		4	1	2	2	16
North Point, Lake Michigan			1			2	1				4

TABLE 65.—List of places on the coasts of the United States where vessels have stranded, &c.—Continued.

LAKE COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
Northport, Lake Michigan		1	3		1						5
Oak Point, Lake Ontario							1				1
O'Connell's Pier, Lake Michigan									1	1	2
Oconto Reef, Lake Michigan									1	1	2
Old Mackinac Point, Lake Huron								3	1		4
Ole Antrim, Lake Michigan								1	1		2
Oswego, Lake Ontario	2		1	5	2	3	1		1	2	17
Owen Sound, Georgian Bay, Lake Huron		1									2
Pancake Shoal, Lake Michigan					1						1
Papoose Island, Lake Huron						1					1
Peach Orchard Reef, Lake Erie									1		1
Pecche Island, Lake Saint Clair	1							1			2
Peninsula Point, Lake Erie								1			1
Peninsula Point, Lake Michigan								1			1
Peninsula Reef, Lake Michigan			1								1
Pentwater, Lake Michigan		1			2		2				5
Père Marquette, Straits of Mackinac	1										1
Perry's Pier, Lake Michigan									2		2
Peshtigo Reef, Lake Michigan						1	1	1			3
Pieton, Lake Ontario					1						1
Pigeon Bay, Lake Erie		1					2				3
Pigeon Bay, Lake Huron					1						1
Pigeon Island, Lake Ontario				1	1			1			3
Pillar Point, Lake Ontario					1						1
Pilot and Detroit Isle, Lake Michigan						1					1
Pilot Island, Lake Michigan		2			1	1	1		1		6
Pine River, Lake Michigan	1					1	1				3
Pinnepoy, Lake Huron			2								2
Pike Island, Lake Michigan						1					1
Plum Island, Lake Michigan	2	2						1	1		6
Point Albino, Lake Erie	1		2		2			3			8
Point au Pelée, Lake Erie	6	6	2	3	11	5	4	3	3		43
Point au Sauble, Lake Huron	1	1				3					5
Point au Sauble, Lake Michigan					1				1		2
Point au Sauble, Lake Superior	1										1
Point aux Barques, Lake Huron	2	3		1	2		1	1	1		11
Point aux Pins, Lake Erie	2					1					3
Point Betsey, Lake Michigan				2							2
Point Clark, Lake Huron, Canada								1			1
Point Dalhousie, Lake Ontario									1		1
Point Edwards, Lake Huron					2			1			3
Point Elgin, Lake Huron				2							2
Point Frederick, Lake Ontario		2		2							4
Point La Barbe, Straits of Mackinac									1		1
Point Moullier, Lake Erie								1			1
Point Peninsula, Lake Michigan				1							1
Point Peninsula, Lake Ontario		1								1	2
Point Permit, Lake Erie							1				1
Point Peter, Lake Ontario			1								1
Point Sanilac, Lake Huron							1				1
Portage Canal, Lake Michigan					1						1
Portage Canal, Lake Superior											1
Portage, Mich.										1	1
Portage River, Lake Superior								1			2
Port Austin, Lake Huron	1		1		1		1	1	1		6
Port Austin Reef, Lake Huron								1	1		2
Port Austin Reef, Lake Michigan					2						2
Port Bruce, Lake Huron		1				2					3
Port Burwell, Lake Erie				2		2	1		1		6
Port Colborne, Lake Erie	8	4	3	3	2	1		1			22
Port Crescent, Lake Erie						1					1
Port Hope, Lake Huron					1						1
Port Huron, Saint Clair River		2	1								3
Port Maitland, Lake Erie			1				2		4		7
Port Myers, Lake Erie	1										1
Port Stanley, Lake Erie		1			1	1					3
Port Washington, Lake Michigan			1	1				1			3
Poverty Island, Lake Michigan	1	1				1					3
Presque Isle Bay, Lake Huron		1	2	1	3						7
Presque Isle, Lake Erie						2					2
Presque Isle, Lake Huron							1	1			2
Put-in-Bay, Lake Erie					1			1			2
Racine, Wis.	1									3	4
Racine Reef, Lake Michigan	1	3	2	3	3	2	2	2	1		19
Rock Falls, Lake Huron								2			2

TABLE 65.—*List of places on the coasts of the United States where vessels have stranded, &c.—Continued.*

LAKE COASTS—Continued.

Name of place.	Fiscal year ending June 30—										Total.
	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	
White Rock, Saginaw Bay								1			1
White Shoals, Straits of Mackinac	1	1		1	2						5
Willard's Bay, Lake Ontario								1			1
Wilson Harbor, Lake Ontario				1				1			2
Wind Point, Lake Michigan									1	1	2
Windmill Point, Lake Erie				3							3
Wolf Island, Lake Ontario				1							1
Wood Island, Lake Michigan								1			1
Woodward's Bay, Lake Michigan						1					1
Yates Pier, Lake Ontario							1				1

TABLE 66.—*List of places where American vessels have stranded in foreign waters during the fiscal years ending June 30, 1875, June 30, 1876, and June 30, 1877.*

Name of place.	Fiscal year ending June 30, 1875.	Fiscal year ending June 30, 1876.	Fiscal year ending June 30, 1877.	Total.
Abaco Island (Bone Fish Bay), Bahamas		1		1
Abaco Island (Green Turtle Key), Bahamas		1		1
Abaco Island (Powell's Key), Bahamas		1		1
Abaco Island (Wood Key), Bahamas		1		1
Abraham's Bay, Monguana Island		1		1
Ahtalta (on sand-beach 20 miles north), Mexico	1			1
Alvarado (25 miles east of), Mexico		1		1
Amherst Island, Gulf of Saint Lawrence	1	2		3
Anguilla Island (Salt Key Bank), Straits of Florida	1			1
Argyle (Old Man), Nova Scotia		1		1
Arogant Shoal (lat. 5° 17' S., lon. 113° 29' E.)		1		1
Bahamas			2	2
Bahama Bank			1	1
Baracoa Harbor, Cuba			2	2
Barbadoes (lat. 58° 40' west)		1		1
Barbaretta Island, Honduras			1	1
Barbuda Island, West Indies		1		1
Barclay Sound, southwest end of Tyaartoos Island, British Columbia		1		1
Bay of Saint George, Newfoundland		1		1
Bay of Saint Lawrence			1	1
Belfast, Carrickfergus Bank, Ireland		1		1
Belize, Main Reef, 30 miles off		1		1
Bermuda		2	2	4
Black Point and Seven Hills, Honduras, Central America	1			1
Bolling Reef, Gulf of Georgia	1			1
Bolton Island, Molucca Group, East Indies	1			1
Bonacca Harbor, Honduras, Central America	1			1
Brara Island, Cape de Verde Island		1		1
Brier Island, Northwest Ledge, Canada		1		1
Brier Island, Pond Cove, Nova Scotia		1		1
Buckos Reef, Tobago, British West Indies	1			1
Caicos Reef, north of, Bahamas		1	1	2
Cape Agulhas (15 miles north of), Africa			1	1
Cape Breton Island		2		2
Cape Hogan, Arichat Island, Nova Scotia		1		1
Cape Isabella, San Domingo			1	1
Cape Negro (25 miles east of Rio Janeiro)		1		1
Cape Negro Island, Nova Scotia	1		1	2
Cape Sable, Nova Scotia	1			1
Cape Saint Mary, Newfoundland			1	1
Cape Verde Island		2		2
Cardenas, Cuba			3	3
Cariaco, Gulf of, Venezuela			1	1
Caribbean, near Reef, Cuba		1		1
Carimata Straits, East Indies	1			1
Carlisle Bay, Barbadoes		1		1
Cay Bars, Little Bahamas			1	1
Cay Largo, West Indies			1	1
Cheticamp, Cape Breton			1	1
Chickotan Island, Kurile Islands, Asia			1	1
China Sea			2	2
Chincorro Reef (90 miles north of Belize)		1		1
Cienfuegos Harbor, west head of, Cuba		1	1	2
Coatzacoalcas River, on sand-bar, Mexico		1		1
Cockburn Harbor Shoal, E. C.		1		1
Colonia Harbor Rock, South America	1			1
Colorado Reef, Cuba	1		2	3
Colorado Reef, Lord Howe's Island, Australia			1	1
Comacho Bay, Peru			1	1
Constantinople (near), Turkey		1		1
Corn Island, Central America	1			1
Crooked Island, Bahamas	1			1
Crooked Island and Passage, near Castle Island, West Indies		1		1
Dartmouth, England			1	1
Demas Key (Salt Key Bank), West Indies		1		1
Dona Maria Inlet, Cuba	1			1
Dugeon Shoal, Yorkshire, England		1		1
East London, Africa			1	1
English Bank (probably), Bristol Channel	1			1
Ensenada, mouth of, Bristol Channel, Argentine Republic			1	1
Fiji Islands, N. E. G. roup			1	1
Flores Island			1	1
Formentera, Balearic Islands		1		1

TABLE 66.—List of places where American vessels have stranded in foreign waters, &c.—Cont'd.

Name of place.	Fiscal year ending June 30, 1875.	Fiscal year ending June 30, 1876.	Fiscal year ending June 30, 1877.	Total.
Frenchman's Harbor, south side Isle of Ruatan		1		1
Gibraltar		1		1
Giegler Light, near		1		1
Gonaives Island, West Indies			1	1
Goodwin Sands, England			1	1
Grand Bahama	1		2	3
Grand Sands, near Trieste			1	1
Grand Turk, northeast of reef		1		1
Grindstone Island, New Brunswick	1			1
Gull Island, Long Harbor, Newfoundland			1	1
Gull Island, Nova Scotia	1			1
Halifax, Nova Scotia			1	1
Hammend's Knoll (off Yarmouth Head)		1		1
Harbor Island, Bay of Islands, Newfoundland			1	1
Havana and Matanzas (between), Cuba		1		1
Hayo Main Rock, Bay of Yeddo, Japan		1		1
Hesquot Sound, Vancouver's Island	1			1
Hogsty's Reef, Bahamas			1	1
Hong Kong, China	2			2
Hoogly River, Diamond Harbor, British India	1			1
Hudson Bay			1	1
Indian Island, Labrador		1		1
Jacquemel Bay, Hayti		1		1
Jardinillos Reef, West Indies		1		1
Jemie Harbor, West Indies			1	1
Jig Rock, near Shelburne, Nova Scotia			1	1
Kaloot Bank, Holland		1		1
Kamschatka, Sea of Okhotsk			1	1
Lavendera Shoal, Matanzas Harbor		1		1
Lemolg, Jutland			1	1
Leones Islands, Montego Gulf, Jamaica	1			1
Liberty Point, Campobello Island, New Brunswick	1			1
Liverpool, England			1	1
Lockville, Geography Bay, West Australia	1			1
Los Palmos, Canary Islands			1	1
Macassar Straits, East Indies	1			1
MacNutt's Island, Nova Scotia		1		1
Madison Island		1		1
Madreia Island		1		1
Magdalen Island, Gulf of Saint Lawrence		1		1
Malpec Bar, Gulf of Saint Lawrence	1			1
Mainadien Reef, Cape Breton			1	1
Maquabo, Porto Rico			1	1
Marfa Drychon Beach, Cardigan Bay, Wales	1			1
Mariguana Island, West Indies		1		1
Mariguana Reef, Bahamas	1			1
Matanilla Reef, Bahama Banks			1	1
Matanzas Harbor, Cuba			1	1
Mayo Island, Cape Verde Group	1			1
Mexico (coast of)			1	1
Middle Wolf, New Brunswick (southern point of)			1	1
Mistaken Point, Newfoundland			1	1
Monte Rugginore (east of Sardinia)		1		1
Moselle Shoals, Bahamas	1			1
Murder Island Ledge (near Yarmouth), Nova Scotia			1	1
Musquash, Bay of Fundy, New Brunswick			1	1
Nag's Head, Louisburg, Cape Breton		1		1
Neptune Shoal, Batavia Harbor			1	1
Newport Roads, Wales		1		1
Noel's Point Reef (entrance Saint George's Harbor), Island of Granada		1		1
North Bimini, Bahamas			1	1
Nuevitas Harbor, Cuba		1		1
Pabillon de Pica, South America			1	1
Palance Shoals (near Manila)		1		1
Para River (mouth of), South America	1			1
Point Negro and Point Race (between), South America			1	1
Popa Island, Pacific Ocean (Malay Archipelago)			1	1
Porter's Passage (east side of), Halifax, Nova Scotia			1	1
Port Maria, Jamaica	1			1
Porto Rico, West Indies			1	1
Progreso, Mexico		1		1
Prospect, Nova Scotia			1	1
Quoin Point, Cape Good Hope, Africa		1		1
Rocas Reef (125 miles northwest of Cape Saint Roque), Brazil	1			1
Rum Cay, Bahamas		2		2

TABLE 66.—*List of places where American vessels have stranded in foreign waters, &c.*—Cont'd.

Name of place.	Fiscal year ending June 30, 1875.	Fiscal year ending June 30, 1876.	Fiscal year ending June 30, 1877.	Total.
Sable Island, Nova Scotia		2		2
Saint George, New Brunswick	1			1
Saint John's, Porto Rico			1	1
Saint Mary's Bay, Nova Scotia	1			1
Saint Pierre, Newfoundland			1	1
Saint Thomas Harbor, West Indies			3	3
Sanger Island, Hoogly River, British India		1	1	1
San José de Guatemala		1		1
Saona Island, West Indies (north side of)			1	1
Scarborough Shoals, China Sea	1			1
Seal Shoal, Newfoundland			1	1
Serranilla Bank, Caribbean Sea			1	1
Shark's Point, mouth of Congo River			1	1
Sheep Keys Shoals, Bahamas			1	1
Sicily Island, near Avola	1			1
Soldier's Ledge, Tusket Island, Nova Scotia	1			1
South Bimini Shoals, Bahamas	1	1		2
Stackpole, England	1			2
Straits of Magellan, South America		1		1
Sumatra, Gaspar Straits			1	1
Suwarrow Reef, South Pacific			1	1
Talbot's Passage, Cape Horn		1		1
Taylor's Bank, River Mersey, England		1		1
Terschelling Light, Netherlands			1	1
Tonalá Bar, Mexico	1	1		2
Tongue Island, English Channel		1		1
Torkeo (near), Sweden		1		1
Trial Island, British Columbia		1		1
Turk's Island, Great Sand Cay		1		1
Turk's Island, Middle Reef, Bahamas	1			1
Turk's Island, Northwest Reef, Bahamas	1			1
Tuspan River (mouth of), Mexico	1			1
Tuspan Bar, Mexico		1		1
Valdes Peninsula, Patagonia	1			1
Verdon Roads (near Bordeaux), France		1		1
Victoria Harbor, British Columbia			1	1
Wicklow Bay, Ireland			1	1
Wood's Island, Bay of Islands, British America	1			1
Woody Island, Cape Breton, British America	1			1
Yabucoa, Porto Rico			1	1
Yarmouth, Nova Scotia		1		2
Zanzibar, Africa			1	1

I N D E X.

	Page.
Abstracts of returns of casualties to vessels on coasts of the United States and to American vessels at sea or in foreign waters during the year ending June 30, 1877	85-160.
Acknowledgment of donations of books	56-57
services of American ministers abroad, and of State Department, in procuring rockets.....	68
Hon. Charles F. Conant in obtaining rockets	68
to officers revenue marine.....	68
marine hospital service	68-69
J. L. Parkinson, architect	69
of receipt of foreign publications	69
Active season, recommendation to extend the, of life-saving stations	66-68
term of, in the several districts.....	9-10
American vessels, additional disasters to, in 1876	86
summary of disasters to, in 1876	87
tonnage of, in 1877.....	90
Amerique, wreck of steamer.....	22-25
Annual statement of wrecks and casualties	85-160
Apparatus, boats, &c., number of times used during the year.....	13
improvement in life-saving.....	36-51
reduction in weight of	36-39
Appendix containing statistics of disasters to vessels for the season of 1876-'77.....	72-81
Appliances, improvement in life-saving.....	36-51
Appropriations and expenditures for the year ending June 30, 1877	3-8
Awards of medals.....	53-56
Ballhache, Surgeon P. H., acknowledgment to.....	68
Bark Tanner, wreck of.....	55-56
Bayley's Harbor, Lake Michigan, recommendation to establish life-saving station at.....	66
Beach lantern, introduction of new reflecting	51
Board of ordnance, action of, in extending range of shot-line	40-41
Boats, apparatus, &c., number of times used during the year	13
life and surf, comparative merits of	44-50
Boatswain's chair, number of times used during the year.....	13
Bolinas Bay, establishment of station at, recommended.....	30
Books, donations of	56-57
Brazos Santiago, recommendation to establish life-boat station at	66
Breeches-buoy, number of times used during the year.....	13
substitution of, for life-car	37
Brown-Sequard, Dr., his approval of Dr. Labordette's views regarding the apparently drowned....	53
Buffalo, opening of life-boat station at	30
Cape Disappointment, Pacific Coast, erection of life-boat station at.....	30
Cape May Point, erection of station at	31
Capsizing of life and surf boats	45
Casualties to American shipping at home and abroad, explanatory remarks	85
ratio of, to number of vessels	90
ratio of lives lost by, to number of persons on board vessels	91
percentages of increase or decrease of, to vessels during 1875-'76 and 1876-'77.....	89-90
Circassian, wreck of ship	13-20
Compensation, of crews of life-boat stations for all occasions of service recommended.....	58-61
of keepers, recommendation to increase	61-64
Conant, Hon. Charles F., acknowledgment to.....	68
Condemned property, recommendation to authorize sale of, and apply proceeds to repairs of stations, &c.....	68
Cox, Hon. S. S., life-saving legislation effected by (note).....	67
Crews, examination of.....	31-36
of life-boat stations, rate of pay of.....	10

	Page.
Crews, English life-boat, award of first-class life-saving medals to	56
of life-boat stations, recommending compensation of, for all occasions of service	52-61
Cranberry Isles, Maine, recommendation to establish life-saving station at	66
Crosby, Col. J. Schuyler, award of first-class life-saving medal to	53-55
Dates of opening of new stations	8-9
De Hart, Lieut. W. C., acknowledgment to	68
Department of State, acknowledgment to	68
"Direct method" of resuscitation, Dr. Benjamin Howard's	52-53
Disasters, for the year ending June 30, 1877, statistics of	10
apportionment of statistics of, to the several districts	11-13
statistics of, within the scope of life-saving operations from November 1, 1871, to close of fiscal year ending June 30, 1877	29
statistics of, for the season of 1876-'77	72-81
to American vessels in 1876, additional	86
summary of, to American vessels in 1876	87
tables of, involving damage amounting to \$500 or upward, for 1875-'76-'77	88
percentages of increase or decrease of, to vessels during 1875-'76 and 1876-'77	89-90
arising from unseaworthy condition of vessels	91-92
on coasts of United States and to American vessels in foreign waters for fiscal year ending June 30, 1877	93-160
Districts, organization of new	8
term of active season in the several	9-10
Donations of books	56-57
Drowned, apparently, resuscitating the	52-53
Dr. Labordette's evidences of vitality in the	53
English life-boat, instances of capsizing	45
crews, award of first-class life-saving medals to	56
Establishment of stations on Pacific coast	30
stations during the year	30-31
new stations, recommendations for	65-66
on coasts of Virginia and North Carolina	65
coast of Texas	65-66
Lakes Michigan and Huron	66
coast of Maine	66
Rhode Island	66
Examination of keepers and crews	31-36
Expenditures and appropriations for the year ending June 30, 1877	3-8
Experiments in extending range of shot-line, &c	39-41
Explanatory remarks upon wreck statistics for 1876-'77	85
Fosberg, Carl, award of first-class life-saving medal to	53-55
Float for carrying a line from a vessel to the shore	43-44
Galveston, recommendation for establishment of life-boat station at	65-66
General summary of wrecks from November 1, 1871, to June 30, 1877	29
Golden Gate Park, Pacific coast, erection of life-boat station at	30
Grosse Point, opening of life-saving station at	30
Gun, character of Parrott life-saving	39-41
knapsack, proposed by Paulding, Kemble & Co.	40
results obtained by Lieutenant Lyle with life-saving	40-41
Guns or mortars, vessels being provided with, for effecting connection with the shore	41-43
Guthrie, Capt. J. J., death of (note)	66
Haight, Hon. Charles, life-saving measure introduced by (note)	67
Heaving-stick, number of times used during the year	13
Herring, Lieut. W. J., acknowledgment to	68
Houses of refuge, personnel, &c., of	10
Howard, Dr. Benjamin, his "direct method" of resuscitation	52-53
Huron, Lake, recommendation for establishment of new stations on	66
Huron, United States steamer, loss of (note)	66
Improvement in life-saving appliances	36-51
Keepers of houses of refuge, duties of	10
examination of	31-36

	Page.
Keepers, manly character and voluntary services of	62-63
recommendation to increase pay of	61-64
Knapsack-gun, proposed by Paulding, Kemble & Co.	40
Labordette, Dr., his evidences of vitality in the apparently drowned	53
Lake Huron, recommendation for establishment of new stations on	66
Michigan, recommendation for establishment of new stations on	66
Lee, Henry M., award of second-class life-saving medal to	55-56
Legislation developing the life-saving service	67
Life, loss of, during the year	13-29
additional, at sea or in foreign waters, in 1876	86
proportion of, to number of casualties	91
Life-boat, or surf-boat, number of times used during the year	13
crews, English, award of first-class life-saving medals to	56
Life-boats, instances of, capsizing	45
and surf-boats, comparative merits of	44-50
Life-boat station, opening of, at Buffalo	30
Golden Gate Park, Pacific coast, erection of	30
recommendation to establish, at Galveston, Tex.	66
Brazos Santiago, Tex.	66
Mustang Island, Tex.	66
Pass Cavallo, Tex.	66
Kenosha, Lake Michigan	66
Muskegon, Lake Michigan	66
Sand Beach, Lake Huron	66
Life-boat stations, rate of pay of crews of	10
erection of, at Neah Bay, Shoalwater Bay, and Cape Disappointment, on Pacific coast	30
recommending compensation of crews of, for all occasions of service.	58-61
Life-car, number of times used during the year	13
substitution of breeches-buoy for	37
Life-saving appliances, improvement in	36-51
medals, awards of	53-56
recommending amendment of law regarding, to include certain cases	61
regulations, revision, &c., of	52, 53
service, interference with, by petty politicians	34, 35
legislation developing the	67
station, opening of, at Grosse Point	30
stations, recommendation to extend the period of active service of	68-67
establish new	65-66
on coasts of Virginia and North Carolina	65
Texas	65-66
Lakes Michigan and Huron	66
coast of Maine	66
Rhode Island	66
Line, float described for carrying, from a vessel to the shore	43-44
shot, character of	41
Long Island, rebuilding old stations on coast of	31
Loss of life during the year ending June 30, 1877	13-29
additional, at sea or in foreign waters, during 1876	86
proportion of, to number of casualties	91
United States steamer Huron (note)	66
Lyle, Lieut. D. A., experiments with rifled mortar by	40-41
Lynch, Hon. John, life-saving legislation effected by (note)	67
Machine for carrying a line from a vessel to the shore	43-44
Margaret and Lucy, wreck of schooner	25-27
Massachusetts, schooner, wreck of	20-22
Medals, life-saving, recommending amendment of law regarding, to include certain cases	61
awards of	53-56
Medicine-chest, introduction of, at respective stations	51
Merriman life-suit, number of times used during the year	13
Merryman, Capt. J. H., services with ordnance board in extending range of shot-line	39-40
acknowledgment to	68
McGowan, Capt. John, acknowledgment to	68

	Page.
McKenna, John, award of second-class life-saving medal to	55-56
Middle Island, Lake Huron, recommendation to establish life-saving station at	66
Michigan, Lake, recommendation for establishment of new stations on	66
Mohawk, yacht, wreck of	53-55
Moneys, recommendation to reimburse, expended in succoring wrecked persons	61
Mortar, number of times used during the year	13
rified, results of experiments with	40-41
Mortars or guns, vessels being provided with, for effecting connection with the shore	41-42
Mustang Island, recommendation to establish life-boat station at	66
Neah Bay, Pacific coast, erection of life-boat station at	30
New Jersey, repairs of old stations on coast of	31
North Carolina, recommendation for establishment of new stations on coast of	65
Old Point aux Barques, Lake Huron, recommendation to establish life-saving station at	66
Oleson, Anton, award of second-class life-saving medal to	55-56
Oleson, Barnt, award of second-class life-saving medal to	55-56
Organization of new districts	8
Pacific coast, erection of life-boat stations on	30
Parrott life-saving gun, character of	39-41
Pass Cavallo, recommendation to establish life-boat station at	66
Parkinson, J. L., acknowledgment to	69
Paulding, Kemble & Co., knapsack-gun proposed by	40
Pay of crews of life-boat stations	10
of life-boat crews, recommending, for all occasions of service	58-61
of keepers, recommendation to increase	61-64
of surfmen, rate of	10
Petersen, N. A., award of second-class life-saving medal to	55-56
Percentages of increase or decrease of casualties to vessels during 1875-'76 and 1876-'77	89-90
Point Conception, efforts to obtain title to site at	30-31
Reyes, authorizing establishment of station proposed for, at Bolinas Bay	30
Political interference with life-saving service in fifth and sixth districts	34-35
Property, condemned, recommendation to authorize sale of, and apply proceeds to repairs of stations, &c.	66
Range of shot-line, extending	39-41
Ratio of casualties to whole number of American vessels	90
of lives lost by casualties to number of persons on board vessels	91
Rebuilding old stations on coast of Long Island	31
Recommendation to compensate crews of life-boat stations for all occasions of service	58-61
to amend law regarding medals to include certain cases	61
to provide for reimbursement of moneys and substance expended in succoring wrecked persons	61
to increase the compensation of keepers of life-saving stations	61-64
to establish new stations on Atlantic and Lake coasts	64-66
to authorize the sale of condemned property, and application of the proceeds to repairs of stations, &c.	66
to enable the stations on the Atlantic coast to be opened for a longer annual period	66-68
to make keepers of stations inspectors of customs	68
Recommendations for promoting efficiency of the service	58-68
Recompense, recommending legislation to, persons expending moneys or substance for wrecked persons	61
Reduction in weight of apparatus	36-39
Regulations, life-saving, revision, &c., of	52-53
Reimbursement of moneys and substance expended in succoring wrecked persons, recommending legislation to secure	61
Remarks explanatory of the wreck statistics for 1876-'77	85
Repairs, temporary, of old stations on coast of New Jersey	31
of stations, &c., recommendation to apply proceeds of sale of condemned property to	66
Resuscitation, Dr. Benjamin Howard's "direct method"	52-53
Rockets, line-carrying, obtained from Europe	37-39
Salaries of keepers, recommendation to increase	61-64
Sale, recommendation to authorize, of condemned property, and apply proceeds to repairs of stations, &c.	66

	Page.
Sawtelle, Dr. H. W., acknowledgments to	68-69
medicine-chest, designed by	51
Shipping, casualties to American, at home and abroad, explanatory remarks	85
Shoalwater Bay, Pacific coast, erection of life-boat station at	30
Shoemaker, Lieut. C. F., acknowledgment to	68
Shot-line, character of	41
extending range of	39-41
Signal-code, introduction of new	50-51
instance of necessity of, in case of Norwegian bark	51
Signal Service, connection of, with life-saving stations	51-52
Site, Point Conception, efforts to obtain title to	30-31
Sleeping Bear Point, Lake Michigan, recommendation to establish life-saving station at	66
Smith, Joseph W., donation of books by	57
Spark, Henry, award of second-class life-saving medal to	55-56
State Department, acknowledgment to	68
Station, erection of, at Cape May Point	31
Stations, dates of opening of new	8-9
rebuilding and repair of old, on coasts of Long Island and New Jersey	31
establishment of, during the year	30-31
recommendation for establishment of new	65-66
on coasts of Virginia and North Carolina	65
coast of Texas	65-66
Lakes Michigan and Huron	66
coast of Maine	66
Rhode Island	66
to extend the period of active service of	66-67
Statistics of wreck-operations for the year ending June 30, 1877	10
apportionment of, to the several districts	11-13
disasters to vessels for the season of 1876-'77	72-81
disasters within the scope of life-saving operations from November 1 to close of fiscal year ending June 30, 1877	29
Stranded vessels, general character of	37
means by which, can connect with the shore	41-44
Substance, recommendation to recompense persons for, expended in succoring wrecked persons	61
Summary, general, of wrecks from November 1, 1871, to June 30, 1877	29
of disasters to American vessels in 1876	87
Surf-boat, or life-boat, number of times used during the year	13
Surf-boats and life-boats, comparative merits of	44-50
instances of capsizing of	45
Surfmen, rate of pay of	10
Tanner, bark, wreck of	55-56
Texas, recommendation for establishment of new stations on coast of	65-66
Title, efforts to obtain, to site at Point Conception	30-31
Tonnage of American vessels	90
Unseaworthy vessels, disasters owing to	91-92
Vessels, American, casualties to, at home and abroad, explanatory remarks	85
additional disasters to, in 1876	86
summary of disasters to, in 1876	87
tables of disasters to, involving damage amounting to \$500 or upward, for 1875-'76-'77	88
tonnage of, in 1877	90
disasters arising from unseaworthy condition of	91-92
ratio of casualties to whole number of	90
ratio of lives lost to number of persons on board	91
percentages of increase or decrease of casualties to, during 1875-'76 and 1876-'77	89-90
character of many, driven ashore	37
stranded, means of obtaining connection with the shore	41-44
statistics of disasters to, for the season of 1876-'77	72-81
Virginia, recommendation for establishment of new stations on coast of	65
Volunteer crews of life-boat stations, rate of pay of	10
recommending compensation of, for all occasions of service	58-61
Walker, Lieut. T. D., acknowledgment to	68
Walton, Lieut. Walter, work of, in the fifth district	32

	Page.
Walton, Lieut. Walter, acknowledgment to.....	68
Watch Hill, Rhode Island, recommendation to establish life-saving station at.....	66
Weight, reduction in, of apparatus.....	36-39
Woodworth, Dr. J. M., arrangement of directions for resuscitation by.....	53
acknowledgment to.....	68
Wreck of steamer <i>Amérique</i>	22-25
ship <i>Circassian</i>	13-20
schooner <i>Margaret and Lucy</i>	25-27
Massachusetts.....	20-22
yacht <i>Mohawk</i>	53-55
bark <i>Tanner</i>	55-56
United States steamer <i>Huron</i> (note).....	66
Wrecks, table of, for 1876-'77.....	72-81
Yacht <i>Mohawk</i> , wreck of.....	53-55

TABLES ACCOMPANYING REPORT.

Tabular statement of wrecks which have occurred within the province of the life-saving stations during the season of 1876-'77, showing specifically in each case the dates, localities, names of vessels, their value and that of their cargoes, the property saved and lost, and the number of lives saved.....	72-81
Table giving summary of disasters to vessels which occurred on and near the coasts, and on the rivers, of the United States, and to American vessels at sea and on the coasts of foreign countries, during the fiscal year ending June 30, 1876.....	87
Table of losses of \$500 and upward for fiscal year ending June 30, 1875.....	88
Table of losses of \$500 and upward for fiscal year ending June 30, 1876.....	88
Table of losses of \$500 and upward for fiscal year ending June 30, 1877.....	88
Table giving total number of vessels meeting with casualties, total values of vessels and cargoes, totals of losses to both, and total tonnage of vessels involved for fiscal years 1875-'76 and 1876-'77, with the relative percentages of increase and decrease.....	89
Table showing the number of sailing and steam vessels, canal-boats, and barges registered, enrolled, and licensed, belonging to the United States on June 30, 1877; the number of each class which have met with disasters during the year, and the ratio of casualties to the number of vessels.....	90
Table showing the number of persons on board vessels suffering casualties, the number of lives lost, the ratio of those lost to the number on board, and the ratio of lives lost to the number of casualties for the last three fiscal years.....	91

Tables of abstracts of returns of wrecks and casualties to vessels which have occurred on and near the coasts and on the rivers of the United States, and to American vessels at sea and on the coasts of foreign countries, during the fiscal year ending June 30, 1877.

ATLANTIC AND GULF COASTS.

TABLE 1.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the number and value of vessels and cargoes, and amount of loss to same, where known.....	92
TABLE 2.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the number of vessels totally lost, the number damaged, aggregate tonnage of vessels totally lost, number of passengers and crew, and number of lives lost.....	93
TABLE 3.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the number of vessels and cargoes insured and uninsured, and the amount of insurance, where known.....	94
TABLE 4.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, distinguishing the nature of each casualty.....	94
TABLE 5.—Abstract of returns of disasters (excluding collisions) to vessels and cargoes on the Atlantic and Gulf coasts during the year ending June 30, 1877, distinguishing the cause of each disaster.....	95
TABLE 6.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the number of vessels collided and distinguishing the cause of each disaster.....	96
TABLE 7.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the number of vessels and distinguishing their description.....	96
TABLE 8.—Abstract of returns of disasters to foreign vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing nationality and description, and distinguishing those totally lost and those partially damaged.....	97

	Page.
TABLE 9.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the tonnage and distinguishing the number of those totally lost and those partially damaged.....	93
TABLE 10.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, distinguishing age.....	99
TABLE 11.—Abstract of returns of disasters to vessels on the Atlantic and Gulf coasts during the year ending June 30, 1877, showing the number of vessels and distinguishing their cargoes.....	99
TABLE 12.—Summary—Atlantic and Gulf coasts.....	100

PACIFIC COAST.

TABLE 13.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number and value of vessels and cargoes, and amount of loss to same, where known.....	100
TABLE 14.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number of vessels totally lost, the number damaged, aggregate tonnage of vessels totally lost, number of passengers and crew, and number of lives lost.....	101
TABLE 15.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number of vessels and cargoes insured, and uninsured, and the amount of insurance, where known.....	101
TABLE 16.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, distinguishing the nature of each casualty.....	102
TABLE 17.—Abstract of returns of disasters (excluding collisions) to vessels and cargoes on the Pacific coast during the year ending June 30, 1877, distinguishing the cause of each disaster.....	102
TABLE 18.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number of vessels collided and distinguishing the cause of each disaster.....	103
TABLE 19.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number of vessels and distinguishing their description.....	103
TABLE 20.—Abstract of returns of disasters to foreign vessels on the Pacific coast during the year ending June 30, 1877, showing nationality and description and distinguishing those totally lost and those partially damaged.....	103
TABLE 21.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the tonnage and distinguishing the number of those totally lost and those partially damaged.....	104
TABLE 22.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number of vessels and distinguishing age.....	105
TABLE 23.—Abstract of returns of disasters to vessels on the Pacific coast during the year ending June 30, 1877, showing the number of vessels and distinguishing their cargoes.....	105
TABLE 24.—Summary—Pacific coast.....	105

GREAT LAKES.

TABLE 25.—Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number and value of vessels and cargoes, and amount of loss to same, where known.....	106
TABLE 26.—Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels totally lost, the number damaged, aggregate tonnage of vessels totally lost, number of passengers and crew, and number of lives lost.....	106
TABLE 27.—Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels and cargoes insured and uninsured, and the amount of insurance, where known.....	107
TABLE 28.—Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, distinguishing the nature of each casualty.....	107
TABLE 29.—Abstract of returns of disasters (excluding collisions) to vessels and cargoes on the great lakes during the year ending June 30, 1877, distinguishing the cause of each disaster.....	108
TABLE 30.—Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels collided and distinguishing the cause of each disaster.....	109
TABLE 31.—Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels and distinguishing their description.....	109
TABLE 32.—Abstract of returns of disasters to foreign vessels on the great lakes during the year ending June 30, 1877, showing nationality and description and distinguishing those totally lost and those partially damaged.....	109
TABLE 33.—Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the tonnage and distinguishing the number of those totally lost and those partially damaged.....	110

	Page.
TABLE 34.—Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels and distinguishing age.....	111
TABLE 35.—Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels and distinguishing their cargoes.....	111
TABLE 36.—Abstract of returns of disasters to vessels on the great lakes during the year ending June 30, 1877, showing the number of vessels and distinguishing the lakes and adjacent rivers on which they occurred.....	112
TABLE 37.—Summary—Great lakes	112

RIVERS.

TABLE 38.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number and value of vessels and cargoes and amount of loss to same, where known	113
TABLE 39.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels totally lost, the number damaged, aggregate tonnage of vessels totally lost, the number of passengers and crew, and number of lives lost.	113
TABLE 40.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels and cargoes insured and uninsured, and the amount of insurance, where known	114
TABLE 41.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, distinguishing the nature of each casualty.....	114
TABLE 42.—Abstract of returns of disasters (excluding collisions) to vessels and cargoes on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels and distinguishing the cause of each disaster.....	115
TABLE 43.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels collided and distinguishing the cause of each collision.....	115
TABLE 44.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels and distinguishing their description	116
TABLE 45.—Abstract of returns of disasters to foreign vessels on the rivers of the United States during the year ending June 30, 1877, showing nationality and description and distinguishing those totally lost and those partially damaged.....	118
TABLE 46.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the tonnage and distinguishing the number of those totally lost and those partially damaged	116
TABLE 47.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels and distinguishing age.....	117
TABLE 48.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, showing the number of vessels and distinguishing their cargoes.....	117
TABLE 49.—Abstract of returns of disasters to vessels on the rivers of the United States during the year ending June 30, 1877, distinguishing the rivers on which they occurred	118
TABLE 50.—Summary—Rivers	119

AT SEA OR IN FOREIGN WATERS.

TABLE 51.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number and value of vessels and cargoes, and amount of loss to same, where known	119
TABLE 52.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number of vessels totally lost, the number damaged, aggregate tonnage of vessels totally lost, number of passengers and crew, and number of lives lost.	120
TABLE 53.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number of vessels and cargoes insured and uninsured, and the amount of insurance, where known	120
TABLE 54.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, distinguishing the nature of each casualty.....	121
TABLE 55.—Abstract of returns of disasters (excluding collisions) to American vessels at sea or in foreign waters during the year ending June 30, 1877, distinguishing the cause of each casualty....	121-122
TABLE 56.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number of vessels collided and distinguishing the cause of each collision	122
TABLE 57.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number of vessels and distinguishing their description.	122
TABLE 58.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the tonnage and distinguishing the number of those totally lost and those partially damaged	123

	Page.
TABLE 59.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number of vessels and distinguishing age.....	124
TABLE 60.—Abstract of returns of disasters to American vessels at sea or in foreign waters during the year ending June 30, 1877, showing the number of vessels and distinguishing their cargoes.....	124
TABLE 61.—Summary—At sea and in foreign waters	125
TABLE 62.—General summary.....	126-127
TABLE 63.—Wrecks and casualties on and near the coasts and on the rivers of the United States and to American vessels at sea or in foreign waters, involving loss of life, during the year ending June 30, 1877, in four divisions, viz: (1) Foundering; (2) Strandings; (3) Collisions; and (4) Casualties from other causes; showing in each case, when known, the description of the vessel and her cargo, the number of lives lost, and the date and place of disaster, &c.....	128-138
TABLE 64.—Wrecks and casualties on or near the coasts and on the rivers of the United States, &c., during the year ending June 30, 1877, involving loss of life	139
TABLE 65.—List of places on the coasts of the United States where vessels have stranded during the last ten years	139-157
TABLE 66.—List of places where American vessels have stranded in foreign waters during the fiscal years ending June 30, 1875, June 30, 1876, and June 30, 1877.....	158-160

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